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ABSTRACT

This report reviews machine-readable information storage technology as of fall 1985, describes its use at certain academic libraries, and makes recommendations for its implementation at the University of North Carolina at Chapel Hill. Focus is on data disks (reference and research materials) rather than on program disks, and suggestions are made for the selection, acquisition, processing, and cataloging of these materials. Also discussed are proposed sites for a machine-readable data file unit within the library and the staffing and service levels that should be provided. Appendices include proposed collection development policies for the University of North Carolina at Chapel Hill and the University of Michigan, summaries of interviews with academic librarians and producers of databases on compact disks, annotated lists of instructional and data disks, and a seven-page bibliography of recommended readings. (Author/THC)

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Academic Affairs Library
University of North Carolina at Chapel Hill

ED264871

REPORT OF THE TASK FORCE ON MACHINE-READABLE DATA FILES

October 3, 1985

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EXECUTIVE SUMMARY

This report examines the state of machine-readable information storage technology as of fall 1985, describes its use at certain research libraries, and makes recommendations for its implementation at UNC-CH's Academic Affairs Library for the next twelve- to eighteen-month period. Summaries of major findings and recommendations follow.

Collection Development

1. The task force cooperated with the University Bibliographer on the draft of a collection development policy for data files on magnetic and optical disks and made suggestions for revisions, many of which were incorporated into the policy.

2. The one area in which the task force and the University Bibliographer disagree concerns the policy regarding purchase of program disks. The task force reasons as follows on this issue:
   a. It is not clear, as the policy implies, that staff will always be able to anticipate which program disks are most likely to be needed to access data disks. Requiring the presence of the needed program disk before the data disk can be ordered will make it more time-consuming and difficult to acquire MRDFs.
   b. The program software necessary to access a specific data disk is part of the entire information package and should be purchased, along with the data disk(s), from the materials budget.

3. The task force suggests that the MRDF unit(s) work closely with Anne Parker and other Microcomputing Support Center staff to see if they can supply the unit(s) with necessary software programs.

4. Based on the most appropriate of the data disks now available, we estimate that it will cost approximately $5,000 to build a basic software collection, with an additional $400 for new subscriptions.

5. Responsibility for collecting general printed indexes, directories, dictionaries and other reference materials about microcomputers and information

storage technology should be assigned to the department responsible for the main MRDF unit so that guidelines can be established.

Hardware, Supplies, and Maintenance

1. Floppy disks, hard disks, laser disks, compact disks, and optical digital data disks are the formats most likely to be acquired by the library.

2. The information/software package is inextricably linked to the machine(s) needed to operate the program. It is best to purchase the most flexible machines available, preferably ones that can be equipped to become interactive with any compact laser disk drives and laser videodisk players presently available. Most of the current software identified by the task force can be run on IBM PC's with appropriate peripherals.

3. Commitment to MRDF stations will entail costs well beyond the purchase of a computer and its peripherals and software packages. Other items essential to operating the service are space, furnishings, supplies, and security devices.

4. It is essential to avoid overcommitment to any technology that cannot be adapted to meet new developments.

5. Costs of MRDF hardware will not decline in the same fashion or at the same rate as the software.

6. Because MRDFs are totally dependent on equipment for access, only the best and most durable hardware should be selected.

Acquisition

1. Although many procedures for the acquisition of MRDFs parallel those for acquisition of printed materials, there are some differences.

2. Any order for machine-readable data needs to be clearly identified, with information about format, quantity, accompanying printed documentation, and so forth. If possible, publishers' advertisements and/or reviews should be included to facilitate the ordering process.

3. Because MRDFs in the public domain can be copied, Acquisitions must be particularly careful to avoid duplicate orders for any public domain MRDFs.

4. Because MRDFs require special handling, specific individuals in Acquisitions should be designated to search and receive all MRDF orders.

5. Although Acquisitions should be responsible for examining any paperwork that accompanies an MRDF order, responsibility for inspecting the data file itself should be assigned to the MRDF unit.

6. At the time the MRDF is inspected, an archival copy of all public domain data files will be made. (Public domain material normally does not come with backup copies; libraries are required to make their own).

Cataloging

1. An MRDF cannot be cataloged until it has been inspected by a representative from the MRDF unit that will house it, and until any necessary copies have been made.

2. Machine-readable data should not be available for public use or distribution until after it has been cataloged.

3. Cataloging will follow the principles set forth in AACR2 and its accompanying guidelines.

4. Although MRDFs will be fully cataloged, they will not be classified. (Accession numbers, however, will be assigned in the same manner as is currently done for AV materials).

5. Cataloging will be input on the OCLC system, using the machine readable data format.

Location

1. Requisites for any physical site(s) designated for the use of MRDFs include the following:
   a. Area must be physically secure to protect hardware and software.
   b. Area must have adequate space for housing hardware, any required software, and supplies and spare parts for operation and maintenance, as well as any accompanying documentation needed to access data. Further, provision in this area should be made for producing and housing archival/backup copies.
   c. Since the location will determine levels of service to some degree, the area(s) should be proximate to other public service areas where personnel are available, and where relevant printed sources are easily accessible.

d. Designated area(s) must meet any requirements of equipment and storage devices, such as temperature and humidity control, as well as electrical wiring.

e. Because the ideal location for the area(s) would be near other public service units, some provision must be made for keeping to a minimum the noise level of operating equipment, especially printers.

f. A location must accommodate software storage and circulation, including provisions for inspecting returned material to determine that it has not been damaged or altered. Given the rapid development of storage technology, the area(s) designated should allow for probable expansion as the collection grows and the level of service increases.

2. The task force visited and evaluated 16 different library locations in Davis Library and the Undergraduate Library. None were ideal, but the task force's choice would be to initiate the service using the spare computer room adjacent to BA/SS, and to move to the TRLN quarters which will be vacated when renovation of Wilson Library is completed. If more than one site is possible, the task force suggests that the second one be in the Undergraduate Library adjacent to the reference desk area on the first floor.

Service Levels

1. Access to machine-readable information has the following components:
   a. Operation of the hardware itself.
   b. Check-out and check-in of software, data disks, and documentation.
   c. Identification of software programs and accompanying documentation needed to access data.

2. Level of service will be dependent on the availability of staff who have the motivation, expertise, and appropriate training. At its optimum an MRDF service would proceed from mere access to facilitating analysis and interpretation.

3. The task force believes the wisest course is to initiate the service at a minimal level, and then increase it as feasible.

4. Full service cannot be provided during all hours the library is open. This is somewhat analogous to online searching.

5. A strong referral network is important. It should extend from reference staff in BA/SS, Humanities, and the Undergraduate Library to other libraries on campus and beyond them, to computing groups throughout the university.

Staff: Number and Qualifications

1. Staff functions relating to MRDF fall into the following areas and would include for each the development of policies and procedures.
   a. Collection development
   b. Acquisition
   c. Cataloging
   d. Circulation
   e. Technical User Assistance
   f. Reference User Assistance

2. The task force suggests that the service be initiated with the assignment of staff members who can begin to address the issues and establish the procedures outlined above. These persons should combine the necessary library and technical skills.

3. Initial staff should be given intensive training opportunities. If at all possible, funds should be allotted for training, and for travel to and consultation with professionals at other libraries and data archives.

Circulation

1. All MRDFs should be used on-site.

2. Patrons will be required to leave proper identification for the use of such material.

3. Program disks necessary for operating specific data disks will be used only with those disks. In other words, software programs will not be available for such uses as word processing, database management, and so on. Software for these uses will be available through the Microcomputing Support Center.

4. These and other stipulations regarding responsibility for loss, damage, and/or replacement should be included in a written circulation policy, to be drafted by each MRDF site and approved by library administration.

5. Copying of public domain disks for individual patron use and retention is the responsibility of the individual. The person making the request must supply a blank floppy disk.

Copyright and Licensing

1. The library should post notices of copyright restrictions on the terminals as well as listing them on data disks.

2. The responsibility for determining what licensing requirements, if any, apply to a particular MRDF rest with the unit placing an order. No order should be placed for an MRDF unless that unit has determined that the library can comply with licensing requirements.

3. MRDF staff should keep apprised of developments in copyright and licensing laws as they relate to libraries.

INTRODUCTION

For the last several years library literature has reflected a growing awareness of, interest in, and enthusiasm for the new mediums that have recently or will soon become available for electronically storing information. Such electronically published information is generically referred to as "machine-readable data files," or "MRDFs," and includes many different formats. Some, such as magnetic computer tape and online bibliographic databases, have been in use for a decade or more. Others, such as data sets on floppy disks for use with microcomputers, constitute a small but rapidly growing market for publishers, and still others, such as the various types of optical disk technology, are generally not yet available to libraries. Although books and articles surveying and speculating about the new machine-readable data file technologies and their impact on libraries abound, little has been published to date about the practical aspects of selecting, storing, and providing assistance in the use of such material.

Thus, in July 1985, a Task Force on Machine-Readable Data Files was created. Its charge was "to examine the categories of materials which would be involved and to provide accommodation for them from their acquisition and cataloging to their housing and circulation (if appropriate) as well as the public service which they may require." In addition, the task force was directed to consult with the

University Bibliographer regarding his recently drafted policy on machine-readable materials and to examine and make suggestions for the revision of that policy.

Members of the task force represented many of the library departments--Collection Development, Cataloging, Circulation, Nonprint, and Reference--that might be most directly involved with MRDFs, and brought to the group widely differing perspectives, competencies, and interests. Although heterogeneous, members of the task force had one thing in common: all felt keenly the need to educate themselves regarding the universe of MRDFs and its implications for the library. As a result, the task force's early efforts centered on investigation--surveying the literature, interviewing producers of electronic information and libraries that have begun to collect or are contemplating collection of these materials, and examining examples of MRDFs presently available. Although these activities are more fully described in the "Preliminary Investigations" section that follows, some conclusions that were reached as a result of these investigations and which affected subsequent task force activities are worth noting here.

First, any attempt to describe new and rapidly developing technology is doomed to obsolescence. Although the report which follows is as up-to-date as we could make it, it examines the state of electronic information technology and its use in libraries as of fall 1985. Changes are occurring so rapidly that, in some instances,

information gathered in interviews in August or September may no longer be accurate. Consequently, this report should be viewed more as a series of snapshots of activities at fixed points in time rather than as an ongoing or definitive look at information technology and libraries.

Second, since this is an area of rapid change and growth, the task force decided to confine most of its deliberations to the library's role within the next year or two. If a particular information medium was not expected to be readily available to libraries in that time, it received only brief attention during discussion of how the Academic Affairs Library should handle selecting, acquiring, cataloging, storing, circulating, and providing assistance in the use of machine-readable data. Thus, information on floppy disks, a readily available medium, receives greatest emphasis, while compact optical disks, an emerging technology not yet widely available, receives somewhat less attention. This report, in short, seeks to deal with the immediate and practical.

Third, the task force devoted only passing attention to MRDFs which are the responsibility of other organizations on this campus. Responsibility for collection of magnetic tapes and for providing assistance in their use, for example, falls primarily to the Institute for Research in Social Science Data Library, and general instruction in the use of microcomputers and building and making available a library of basic software programs for word processing,

database management, and spreadsheet analysis is the responsibility of the Micrcomputing Support Center. As a result, magnetic computer tapes and basic microcomputer software packages are not covered in this report.

Finally, keeping abreast of developments in electronic publishing, monitoring the Academic Affairs Libraries' involvement in this area, and planning for its future will require the active and continuous participation of library staff. As new electronic mediums become available, decisions will need to be made about how to incorporate them into library operations.

The report which follows is divided into three main sections: a description of our preliminary investigations, the task force's recommendations regarding specific ways in which the Academic Affairs Library should accommodate and provide assistance in the use of MRDFs, and a series of appendices that provide supplementary information. It is hoped that the information this report contains will prove enlightening; certainly for members of the task force involved in its gathering and creation, the process has been stimulating, enlightening, and enriching.

PRELIMINARY INVESTIGATIONS

SURVEY OF THE LITERATURE

The task force began its work by searching library, information science, and poular computing literature. In all, over one hundred books, periodical articles, and reports were identified and read. The most useful of these comprise the bibliography contained in Appendix 1. Following the study and discussion of these publications, the task force was able to proceed to identify and describe the universe of machine-readable data files, discussed in the section which follows.

MACHINE-READABLE INFORMATION STORAGE TECHNOLOGIES

Background and Trends

Since the establishment of data archives for magnetic tapes in the 1960's, research libraries have assumed limited responsibility for collecting and servicing machine-readable data files. These materials, instead, usually have been collected by special data archives such as UNC's Institute for Research in Social Science Data Library. Such organizations tend to be administratively and physically separate from the general library system, and their holdings primarily consist of archival materials on magnetic tape that are typically of interest to that segment of social scientists interested in secondary analysis of data already collected by other researchers or organizations.

Recent advances in microcomputer and laser technologies and new developments in publishing are beginning to alter the nature and importance of machine-readable data files as library information sources. By the early 1980's significant amounts of instructional software appropriate to academic library collections started to come on the market. In 1985 important reference and research materials began to appear on floppy disks, while advertisements started to appear for a few data files on hard and optical disks. By 1986 the compact optical disks, which seem likely to emerge as the principal computer-based information storage technology in libraries, will be commercially available.

The first essential materials appropriate to research library collections available as machine-readable data files on floppy and hard disks are reference serials, particularly directories and major statistical compendia. Indeed, many of the these machine-readable data files were created in order to produce printed reference works. With the advent of compact optical disks the library can expect to see other major reference titles become available as machine-readable data fields, especially works requiring vast storage capacities such as encyclopedias and indexes. In time, many of the more specialized titles with limited market appeal will become available in machine-readable format.

With regard to research materials proper, over the next decade major scholarly journals, particularly those in medicine, science, and technology, probably will be the first titles to become available in machine-readable form. With regard to time-sensitive information resources in particular, the print and machine-readable formats will increasingly diverge, with the latter being more current and possibly more comprehensive. Over the course of the decade many important works will be published only in a magnetic or optical disk medium. Finally, with the increasing importance of secondary analysis in scholarly research, the library might very well find itself collecting and making available archival materials in machine-readable form produced by individual researchers, in addition to its more

traditional role of providing users with access to published materials.

After careful investigation the task force recommends that the Academic Affairs Library collect the following magnetic and optical formats: floppy disks, hard (microcomputer) disks, laser disks, compact optical disks, and optical digital data disks. Each of these machine-readable information technologies is discussed below. The emphasis is on what exists now or what will be available within the next twelve to eighteen months, with some mention of what is scheduled to become commercially available by the end of the decade. (For detailed information on the specific machine-readable titles mentioned below see the examples in Appendix 2.)

A. MAGNETIC MEDIA

Magnetic media comprise one of the two principal machine-readable information storage technologies. Magnetic technology stores data on a magnetized surface and the information is read by a device called a read/write head, which consists of two magnetic poles that are separated by a small gap that is perpendicular to the motion of the medium. The storage capacity and speed of magnetic media are a function of the physical limitations of the magnetic material, the size of the gap between the two poles (which determines the minimum track width and hence the tracks--i.e., concentric strings of data--per inch), and the distance of the head from the magnetic surface.

1. FLOPPY DISK (DISKETTE)

A floppy disk (diskette) is a flat circle of mylar substrate or some other polyester coated with a magnetic oxide, rotating inside a special jacket that continuously cleans the surface. Floppy disks typically come in 5 1/4 inch and 8 inch formats and can be used in a normal office environment. The 5 1/4 inch disk, which has emerged as the standard for microcomputers, is either double-density with a capacity of 360 K (kilobytes) or quad-density with a capacity of 1.2 MB (megabytes). (One MB = 1000 K). Although inexpensive in comparison to hard disks, the restricted capacity of floppy disks makes them too small for almost all online data bases and limits them as a means of distributing information.

Floppy disks are mainly used for instructional materials and small databases, e.g., College Scan IV, Directory of Public High Technology Corporations, and Population Estimates from Federal-State Cooperative Programs and General Revenue Sharing Programs 1982. Certain large files such as County and City Data Book and Census of Agriculture 1982 are being offered experimentally on floppy disks; however, these data files take scores of floppy disks to store the information and pose difficult logistical and downloading problems for both the library and its users. In terms of price, most of the instructional data files identified by the task force cost less than $50, while the

reference titles range in price from less than $100 to over $3,000.

2. HARD DISK

A hard disk is a flat, circular magnetic storage medium that is coated on one or both sides with a magnetic film and is continuously rotated while in use. Multiple disks are mounted on a spindle to form a disk pack. The data is written and read in concentric circles called tracks on the surface of the disk, and the read/write heads are moved by access areas into position over the desired track. The disks in use range in diameter from 3 inches to 36 inches and require special environmental conditions. Hard disks can be used on mini- and mainframe computers as well as microcomputers, and they can be either fixed or removable, with the latter type providing for the transportation of information. A microcomputer hard disk, which is the type that the task force recommends the library collect, generally has a capacity of between 6 to 50 megabytes (MB), which is approximately equal to between 20 and 150 floppy disks, and generally cost $700-2,000 apiece. (As of summer 1985 advertisements for 140 MB microcomputer hard disks have appeared and the top prices for certain microcomputer hard disks can reach $5,000.)

Microcomputer hard disks have sufficient capacity to make them ideal for local storage of small and medium-sized databases and for downloading data from larger systems. As a publishing medium the hard disks represent a more recent

development than the floppy disks, and the task force could not find any examples of instructional materials on hard disk. The few reference and research titles that now exist on hard disk such as the CorpTech Database are primarily aimed at the business world and cost several thousand dollars.

B. OPTICAL MEDIA

Optical media comprise one of the two principal machine-readable information storage technologies. Optical technology stores data as a series of spots on light- or temperature-sensitive media and the information is read by a laser beam. Optical recording resolves the two major constraints of the magnetic recoding technology: 1) limited bit storage densities and 2) limited read/write speeds. While magnetic bit densities have been severely limited by the physical constraints of the magnetic coatings, head-to-surface distances, and head thickness (track width), optical technology is limited only by the wavelength of light, which is about one micron (or 40 millionths of an inch). In addition, optical technologies allow for much greater speed in information processing because they are not constrained by the close manufacturing tolerances and inherent physical limitations of the magnetic medium. Moreover, because there is no direct contact between the platter and disk drive, the optical media do not suffer any physical degredation with use. Finally, optical disks also have a much longer shelf life than magnetic disks. They represent a very durable

technology that does not require special environmental conditions.

In terms of potential library and publisher uses there are three major optical storage technologies: read-only, read-write, and read-write-erase. Although all of these optical memory devices have the capacity to store billions of characters on a single platter, rapidly accessible and with greater reliability than available magnetic media, their characteristics, applications, and expected impact on electronic publishing are very different.

READ-ONLY MEMORY (ROM)

Although there are only a few dozen facilities in the world that possess the sophisticated and expensive equipment required to produce ROM disks, potentially dramatic economies of scale are possible with high-volume production because mastering costs are spread over large numbers of copies. Because read-only data files are produced by mastering and replication, while the other two optical technologies to be discussed are designed to allow recording of data on a self-contained, "self-developing" medium at the computer, the former have the inherent advantage in publishing applications in that they can be reproduced quickly and cheaply. This feature not only makes read-only optical devices very attractive to publishers and also explains why the first to become available were aimed at the mass entertainment market and the first machine-readable titles appropriate to research libraries to appear on laser

and compact disks are those with a large market, e.g., the major encyclopedias and indexes.

1. LASER DISK (DIGITAL VIDEODISK)

A laser disk is a 12 inch optical disk with a storage capacity of 1 gigabyte. (One gigabyte, or GB, equals 1000 MB and is approximately equal to 3,100 floppy disks). It can hold both digital data, e.g., text and numbers, and analog data, e.g., images and sound (including full motion pictures). A laser disk can be used with a stand alone reader or with a reader in conjunction with a micrcomputer if sophisticated retrieval is desired. In addition, the images retrieved from a laser disk can be transmitted to remote locations by cable.

Publishing potentials include complex software programs, mixed media packages, computer-aided instruction and simulation, entertainment, and database distribution. It is expected that digital videodisks will eventually supplant microforms. The home entertainment laser disks typically cost $30 and those appropriate for an academic library, such as National Gallery of Art: A Tour and Catalog and Academic American Encyclopedia, typically cost $80-$90. (The print version of the Academic American Encyclopedia costs several times more than the laser disk edition, while a traditional audio-visual presentation of the information contained in the National Gallery of Art set would be prohibitively expensive.) Among the few large databases with millions of records now available in this format are

various versions of the Library of Congress machine-readable cataloging records now on the market. Their yearly subscriptions range from $900 to 4,800, depending on the he manufacturer and exact scope of coverage.

2. COMPACT DISK (CD-ROM)

A compact disk is a 4 3/4 inch optical disk with a storage capacity of 600 MB, which is approximately equal to 1900 floppy disks. It can hold both digital and analog data, and its publishing potentials include software programs, mixed media packages, and especially database distribution.

The CD-ROM is expected to emerge as the principal computer-based information storage medium for electronic publishing of materials appropriate to library reference and research collections. The Academic American Encyclopedia is the only title appropriate to academic library collections that has actually been published, and it sells for $199. By mid-1986, however, a number of major social science indexes are scheduled to become available on compact disks. Psychological Abstracts/PsychLit and ERIC will be the first databases available, with projected subscription prices in the $3,000-5,000 range.

Because the CD-ROM technology is so new--it only became commercially available in July 1984 and at present the microcomputer laser readers required to use them are not commercially available but must be purchased directly from the manufacturer--it is difficult to project software and

hardware costs, especially since the publishers and manufacturers are predicting dramatically falling prices once this medium reaches a wide market.

READ-WRITE (ONCE) MEMORY

The major technical difference between read-only and read-write memory devices is that the latter gives users the capability to write their own information on a disk until the disk fills up. Read-write memory is generally known as a DRAW (direct-read after write) or WORM (write once/read many times) technology because of this capability, although current technology does not allow for changes or erasures of file once written.

1. OPTICAL DIGITAL DATA DISK (ODDD)

The ODDD is a 12 or 14 inch optical disk with a storage capacity of 4 GB, which is approximately equal to 12,500 floppy disks. This optical technology holds digitally encoded text and images and is best suited for large-scale archiving such as the online catalogs of large libraries. As of fall 1985 there are no commercially available titles.

2. COMPACT ODDD

Currently under development is the compact ODDD, a 5 1/4 inch disk with a storage of 100-500 MB. It will hold digitally encoded text and images and is best suited for office documents. As of fall 1985 there are no commercially available titles.

READ-WRITE-ERASE MEMORY

Read-write-erase memory allows the user to change or erase a file once it is written. In contrast to the read-only and write-only memory devices, which are relatively mature technologies, the read-write-erase technology is very unstable, and there is a wide range of different and incompatible standards in production and in development. Read-write-erase optical disks that can be mass produced and updated probably will not be commercially available for another three to four years. These disks, however, will have a higher cost than current read-only and read-write-memory devices, and the development of an infrastructure for their replication parallel to that which currently exists for the other optical disk technologies seems distant.

The chart which follows summarizes the important characteristics of each of the machine-readable information storage mediums which have been discussed.

SCHEMATIC PRESENTATION OF MRDF DISK TECHNOLOGIES

MRDF DEVICE	TYPE OF TECHNOLOGY	PHYSICAL SIZE	STORAGE CAPACITY	HARDWARE REQUIREMENTS	LIBRARY USES
floppy disk	magnetic	3 1/2 in. 5 1/4 in.	360 K to 1.2 MB	microcomputer	instructional materials; small databases
hard (microcomputer) disk	magnetic	5 in to 14 in.	6 to 50 MB (ads for 140 MB now appear)	microcomputer	small- and medium-sized databases; downloading data from larger systems
laser disk (digital videodisk)	optical read-only	12 in.	1 GB	laser player with or without microcomputer	complex software programs; mixed media packages; computer-aided instruction and simulation; entertainment; database distribution
compact disk (CD-ROM)	optical read-only	4 3/4 in.	600 MB	microcomputer with laser reader	complex software programs; mixed media packages; database distribution
optical digital data disk (ODDD)	optical read-write	12 in. 14 in.	4 GB	microcomputer with laser reader	large-scale archiving, e. g., library catalogs and archival collections
compact ODDD	optical read-write	5 1/4 in.	100 to 500 MB	microcomputer with laser reader	small-scale archiving, e. g., small databases and office documents

INTERVIEWS WITH LIBRARIANS AND DATABASE PRODUCERS

UNC-CH

Members of the task force, all from Davis Library and the Undergraduate Library, knew that although there was considerable interest in MRDFs, neither library had collected such material. It was less clear, however, what other campus libraries were doing. As a result, twelve campus libraries were contacted: Botany, Brauer [Math/Physics], Carolina Population Center, Geology, Health Sciences, Institute of Government, Keenan [Chemistry], Law, Library Science, Music, Planning, and Zoology. Most were aware of the potential of MRDFs, but only two, Planning and Health Sciences, were actively planning to make such material available to the public. (Notes and accompanying documentation from the interviews with these libraries are included in Appendix 3.)

In addition, several UNC-CH librarians were asked to speak to the task force. These included James F. Govan, University Librarian, Joe Hewitt, Associate University Librarian for Technical Services, Jack Shipman, University Bibliographer, and Sue Dodd from the Institute for Research in Social Science Data Library.

Other Libraries

A search of the literature revealed that only a handful of research libraries were purchasing and providing assistance in the use of computer tapes. Still others were installing public access microcomputer clusters and providing training in basic computer literacy and the use of basic software packages. Hardly any were collecting data disks. For example, Yale University's Social Science Library and the University of Florida Library have been collecting and making available computer tapes for some time, while Stanford University and SUNY-Albany are more recent entrants. Similarly, Cornell University's Mann Library, the library of the Colleges of Agriculture and Human Ecology, houses and staffs a microcomputer cluster, as do libraries at Texas A&M, the Florida Institute of Technology, the University of Michigan, and the University of Wisconsin-Parkside. It seems likely that other libraries may be offering public access microcomputer clusters as well, but the published literature does not fully reflect the involvement of libraries.

Task force members conducted lengthy telephone interviews with librarians representing four of the institutions mentioned above--the University of Florida, the University of Michigan, the University of Wisconsin-Parkside, and SUNY-Albany. Although copies of notes from these interviews are included in Appendix 3, it may be worth summarizing our findings.

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The University of Florida Library was one of the first research libraries to collect MRDFs, beginning with census tapes some 15 years ago. Since then, it has acquired tapes through membership in the Inter-University Consortium for Social and Political Research (ICPSR) as well as commercially produced tapes. Although this collection is designated as being held by the "Data Library," there is in fact no such library. The tapes themselves are stored in the main library's systems office, and assistance in their use and the use of the codebooks that accompany them is provided by the reference department. The Social Sciences Reference Librarian has primary responsibility for general public service, while the systems office contributes more highly specialized technical assistance. Although computer tapes constitute the bulk of the MRDF collection, the library has recently begun to collect data disks such as the County and City Data Book and County Business Patterns.

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Making them available to the public, however, is no easy matter. As there are no public access microcomputers in the library, library users must share the reference department's microcomputer. Since the microcomputer is used for internal record-keeping and online searching as well as accessing data disks, it is extremely difficult to schedule for public use; often it may take as long as a day or two. Copying of public domain data disks onto user-provided floppy disks is done by the reference department or systems office staff; library-owned disks do not circulate outside the reference department. Technical services departments play only a minor role in the acquisition and processing of disks. Inspection of MRDF orders is conducted by reference rather than acquisitions staff, and reference staff are responsible for the very limited cataloging done for each item.

The library at the University of Michigan houses some 90 microcomputers, 60 of which are for public use. A task force recently submitted a draft of a policy regarding the selection, acquisition, and cataloging of software. (No distinctions between general program, instructional, and data disks are made in the policy). The draft policy deals with both public use and staff use software, and considers issues common to both. Major statements regarding public use software are as follows:

1. "Software purchase is made from materials budget funds and is included by fund managers in their annual request for funds."

2. "Software is selected by individuals now responsible for the book fund."
3. "Software is controlled bibliographically through records in Geac [an automated circulation system]."
4. "Circulation of software for the public use is done at the discretion of the individual library units in compliance with copyright provision.
5. "Software acquisition for patron use is not supported by the Systems Office."
6. "Gift software is evaluated according to rules which obtain for other gift materials and the policies of individual units."

In addition, the following statements, relevant to both staff and public use software, were made:

1. "All library-acquired software is acquired through the Acquisitions Department regardless of the source of funding."
2. "Software is held while it is effective and relevant to the needs of our patrons or staff. Software for public use which is out-of-date or damaged software [sic] is withdrawn or replaced at the discretion of the selector."
3. "It is expected that the Copyright Compliance Guidelines for Software will be observed by the library."

To our knowledge, the University of Michigan is the only other research library other than UNC-CH which has drafted a collection policy to deal with the selection of software. Although a copy of the University of Michigan's draft policy is included in Appendix 3, the attachments which accompanied it were too lengthy to include. A copy of the draft in its entirety is available from the task force chair.

The Association of Research Libraries Spec Kit, Nonbibliographic Machine-Readable Data Bases in ARL Libraries, describes the activities of a task force on nonbibliographic databases at SUNY-Albany. Among its recommendations were that the library collect and maintain publicly available numeric, referral, full-text, and textual-numeric databases, and that it provide reference service for these databases. To that end, the library advertised for a librarian to serve half-time as social sciences bibliographer, and half-time as data collections coordinator. A telephone interview with the head of Collection Development, however, revealed that it had been necessary to advertise the job three times, each time further de-emphasizing the need for expertise in or experience with nonbibliographic databases. Although the position has been filled for approximately one year, staff absences have required that the appointee temporarily set aside many of her MRDF responsibilities. Next year she will spend more time on that portion of her job; goals for the forthcoming year include preparation of a directory of available nonbibliogrpahic databases on campus, drawing up a budget for the collection of this material, and drafting a collection policy for MRDFs. Presently, the library is responsible for membership in the Inter-University Consortium for Political and Social Research, and for housing and providing assistance in the use of codebooks (printed guides to the contents and use of specific data files). No attention has yet been given to the acquisition

of data sets in other formats, such as magnetic or optical disks.

Database Producers

One of the most interesting exhibits at the American Library Association meeting this summer was the one mounted by SilverPlatter, a division of the IMLAC Corporation. At its booth were microcomputers for end-user searching of major bibliographic databases such as ERIC and Psychological Abstracts. What made these databases special is that they were stored on compact disks, available for library subscription, rather than at a remote access mainframe computer. SilverPlatter plans to market five different databases--ERIC (Educational Resources Information Clearinghouse), Index Medicus, LISA (Library and Information Science Abstracts), PAIS (Public Affairs Information Service), and PsycLit (Psychological Abstracts). Each will be available on one or more compact disks at annual subscription rates expected to range from $3,000 to $5,000.

Although expensive, the availability of these databases to individual libraries on compact disks has profound implications. The databases are intended for use by lay people rather than experienced searchers; as a result, it is entirely possible that in the not-too-distant future, library users may be performing many of the searches presently requiring a librarian as an intermediary. Since the library will be paying a flat subscription fee--one which, it is hoped, will decline as this technology becomes more commonplace--it can choose to fully subsidize such searching or to charge a single, flat rate for all searches. Further, since the databases offered are among those most heavily searched, this might free librarians to concentrate on more technically demanding searches or on assisting users with other MRDFs.

Initially, databases on compact disk might not be as comprehensive as their online counterparts. The difference is most notable in PsycLit, which excludes certain categories of materials such as dissertations and whose retrospective files go back only to 1974, while the online database goes back to 1967.

Interviews with producers of the ERIC, PAIS, and PsycLit databases revealed varying levels of progress, but it is expected that the ERIC and PsycLit databases may be available as early as April 1986.

ACADEMIC AFFAIRS LIBRARY, UNC-CH

COLLECTION DEVELOPMENT

In the area of collection development the task force has focused on working with Jack Shipman, University Biblographer, to refine the acquisitions policy for machine-readable data files. (See Appendix 4.) Members of the task force have thoroughly discussed the proposed collection development policy and its implications for the Academic Affairs Library among ourselves and with Jack Shipman, and with one exception to be discussed below we strongly support this policy on magnetic and optical disks and urge its adoption.

The one element of the policy with which the task force disagrees concerns the treatment of program disks. While the library has no obligation to provide program software to be used independently of library materials, we unanimously conclude that the library must provide program software needed to operate machine-readable data files appropriate to its collections. In our opinion the acquisition of any program disk for a data file to make it usable is analogous to buying a guide for a microform collection to make it usable or paying for binding a book to make it usable. If required program disks cannot be provided by another campus agency such as the Microcomputing Support Center, then their cost should be considered a part of the acquisition price and selectors need to be given to library funds to acquire essential software.

As a consequence, the task force concludes that it is important to treat program software in the main collection development policy for machine-readable data files. Indeed, a policy for program disks must first be in place in order for the library to acquire any machine-readable data files requiring such software. We further suggest that the criteria for the acquisition of program software be the same as for the data files themselves, that the selector responsible for the acquisition of the data files also make the decisions about needed program software, and that it is most appropriate to pay for such program software from the same library materials budget lines used to acquire the data files themselves.

In order to give some idea of the software costs of a basic collection of reference titles on floppy disks for the main library based on what is actually available for immediate purchase, a hypothetical start-up budget is presented in Appendix 5. Such a collection of priority titles would involve an initial outlay of approximately $5,000 for data and program disks and over $400 in recurring subscription costs.

Finally, the task force recommends that the library decide on collection development responsibility for general machine-readable data files and microcomputer titles. While existing divisions of collection development responsibility will determine which unit will acquire subject-specific titles, it is not clear which Academic Affairs Library division has the obligation to collect general materials. At present Davis Library collections contain a number of general software and hardware directories as well as general review sources such as Software Reviews on File, while the Brauer Library and, to a lesser degree, the Undergraduate Library contain most of the general microcomputer periodicals. It seems that a greater level of centralization or at least coordination of collection development responsibility is needed.

HARDWARE, SUPPLIES, AND MAINTENANCE

Machine-readable data files require technology or hardware that is either specific to a particular kind of software or flexible enough to be used with a variety of formats. When decisions are made regarding any of these new technologies, there must be built-in safeguards against rapid obsolescence, incompatability of software with hardware, and some certainty that software and other information resources for any one kind of hardware do in fact exist. The first task is to determine the kinds of software formats most suitable for the library's needs. The task force concludes that the following formats are likely to be the most compatible with the library's planning regarding MRDFs:

1. Floppy Disks
2. Hard (Microcomputer) Disks
3. Laser Disks
4. Compact Disks
5. Optical Digital Data Disks

There is a growing number of library and bibliographic sources currently available or being planned and tested, including such systems as the Directory of Public High Technology Corporations, the Chronicle DataService, a national survey of public and private colleges and universities, and County and City Data Book. All of these data files are available on floppy disks.

Compact laser disk (CD-ROM) programs that are being packaged include SilverPlatter databases such as ERIC and LISA, and Grolier's forthcoming Academic American

Encyclopedia which will be available in CD-ROM and on 12-inch laser disks.

There are fewer library resources advertised as available on hard disks than the above-mentioned formats, but an increasingly wide range of laser disk programs from feature films to Grolier's encyclopedia are becoming available.

The formats mentioned above indicate the range of possibilities to be addressed or considered when buying hardware for use of machine-readable data files. It is essential to remember that the software package desirable is inextricably linked with the machine needed to operate the program. They must be compatible. When the library begins to acquire MRDFs it is likely that it will want to purchase the most flexible machine unit available. For example, a microcomputer that can be adapted to be interactive with any compact laser disk drive and laser videodisk player available on the market would be the most appropriate first purchase. Most of the current software can be run on IBM PCs with appropriate peripherals. However, several major hardware manufacturers have or are designing units specific to some of the MRDF formats.

Types of Hardware Available and Sources for Information on Available Products

MICROCOMPUTER AND PERIPHERALS

The essential piece of hardware to acquire will be a microcomputer. The IBM PC is the computer most often compatible with software databases using floppy disks,

compact laser disk drives, and laser videodisk players. This versatility of the IBM PC ensures the library of a unit flexible enough for almost any MRDF adaptation contingency in the forseeable future. The general availability of the computer through local dealers and state contract jobbers is an added plus for both maintenance and purchase of parts and peripherals.

The basic IBM PC with two disk drives, printer, surge protector, and cables currently costs the following:

IBM PC 256K. 2 disk drives.	$1,558
Amdex 310A Monochrome Amber Monitor. (Use of a larger TV monitor is possible)	187
Epson FX100 (or MX100) Printer	665
5612 Printer Cable	32
Power Surge Protector	55
4900 Monochrome Display Printer Adapter Card	175
TOTAL	$2,672

The components and peripherals listed here may need to be adjusted if a CD-ROM disk drive or laser video player are part of the initial MRDF configuration. Additional video and audio cables may be necessary.

No other peripherals are necessary to make use of the basic IBM PC for databases consisting of floppy disks unless program software packages are required for operating some databases. There are also numerous useful furniture and supply items that can be considered for housing the

machine(s) and for providing protection from vandalism and general security. These items can be found in library and office supply and furniture catalogs from companies such as DEMCO and Highsmith.

DEMCO, for example, offers a device called the Micro-Alert Motion Detector, designed specifically for the IBM PC or PC/XT, which sells for $89.95. The device has a high-pitched "screech" which is set to prevent any unauthorized movement of the computer. No adaptations to the computer are necessary, and the device protects monitor, keyboard, and printer cables. Access to additional machine boards (any additional cards such as a controller card for laser or CD-ROM disk drives, for example) is prohibited. Micro-Alert is just one such mechanism the company offers. There are others with a wide range of sophistication and price ($44.95 to $129.95), and for IBM PC/XT as well as for Apple computers.

FURNITURE

Furniture for housing computers is quite varied in style and price. There are cubicles that can hold only the basic components, such as computer disk drives, and small printer. There also combinations of tables, carrels and stands that could make more elaborate computer stations. It is probable that the compact disk and laser video components will consume little additional space overall, but purchase or local construction of multi-purpose carrels will be essential to allow table-top room for added components.

Space considerations may at some point include any printed documentation that could accompany certain MRDF databases.

Workstations, desks and stands range in price from a low of $89.95 to as high as $599.95. DEMCO and Highsmith both offer price discounts for multiple purchases.

LASER VIDEODISK AND COD-ROM DISK DRIVES

The 12 inch laser videodisk and compact laser videodisk components and disk drives compatible with either the IBM PC or PC/XT are available from a number of hardware producers, most notably Sony, Hitachi, North American Philips, and Laser Data. Pioneer, Philips, and LaserData also manufacture laser videodisk players.

Grolier's Academic American Encyclopedia MRDF package, KnowledgeDisc, is available in both laser video and CD-ROM. The laser videodisk version can be played back on standard laser video players such as Pioneer LD700 (one is available in Nonprint in the Undergraduate Library). No computer interaction is necessary; all that is required are a player and a monitor. The CD-ROM or compact laser videodisk, on the other hand, permits the user digital access to the same publication. The laser program permits step-by-step access, whereby one presses the step function on the laser disk remote to scan page by page through the encyclopedia. The CD-ROM digital access means that entry-by-entry access is possible. Both are random access, read-only-memory technologies.

North American Philips and Hitachi manufacture CD-ROM disk drives compatible with IBM PCs. Philips CD-ROM disk drive costs $1500 for a single disk drive. A controller card for the unit, to be inserted in the PC will cost an additional $500. The CD drive is compatible with the IBM PC and PC/XT. Philips anticipates an AT compatible disk drive by the end of the year. They offer a reduced price for purchase of (unspecified) quantities of the disk drives that could reduce unit price to $600. The contact for North American Philips is as follows:

Rod Van Eyke
North American Philips Corporation
100 East 42nd Street
New York, NY 10017-5013
(212) 697-3600

Hitachi's CD-ROM disk drive costs $1900 for a single drive unit. The unit price includes Interface card, cable wire to connect CD with computer, a floppy disk, and a demonstration CD disk that outlines the use and design of the Hitachi program. Next year the company anticipates having a two disk drive unit available. All sales are direct and pre-payment is required. Hitachi's contact is as follows:

Nick Fostikawa
Hitachi Sales Corp. of America
401 West Artesia Blvd. Compton
Los Angeles, CA
(213) 537-8383

LASER DIGITAL DISK PLAYER

According to Information Access, the system this laser video player resembles most is a mainframe computer. The

player was designed or at least specially adapted for InfoTrac, a general reference disk comprised of data files such as Newspaper Index, Magazine Index, and Business Index. The player has a multi-splice unit that can join from 2 to 4 IBM PCs with 25 feet of cable (up to 100 feet can be provided, if necessary) in a security enclosed system. Though an InfoTrac consumer representative said in a telephone interview that the laser player they use was adapted especially for them, the LaserData digital videodisk player is also being used with at least three other MRDF programs--ISSI/Gaylord's Laserfile MARC database, R.R. Bowker's Software Catalog, and Carrollton Press' MARVLS MARC and REMARC records for retrospective conversion. InfoTrac is clearly being designed as a software package interactive with a specific piece of hardware. It is to be hoped that the other packages will be accessible on any compatible laser or compact drive video system. If not, we could face the same problem we do with competing and incompatible microcomputer programs--software that is useable on only a particular machine type, a clear disadvantage to our library. Factoring in hardware costs for every different machine-readable data file would make their acquisition much more expensive.

Sony does have CD-ROM laser video disk drives and laser disk players, but they may be available only in a system such as the Sony SMC-70 Microcomputer. The system has its own computer with disk drives and a CRT that accepts

standard NTSC television signals from a videodisk player. The basic unit starts at $995, with the various peripherals making the price much higher than any of the other hardware except the LaserData package for InfoTrac, which might cost $16,000 for its combination of microcomputers, laser videodisk player, cables, and software package. In addition, the equipment is also leased, not purchased.

Supplies and Maintenance

If the library acquires MRDFs and the appropriate hardware, consideration must be given to providing the computer station with computer supplies such as extra disks, computer paper, and ribbons for printers. It is generally a recommended and usual practice for backup copies of software packages to be made by the user if they are not provided by the producer of the package. Nearly all word processing and database management software come with tutorials as well as backup copies. It is likely that many of the MRDF packages will have them as well, but some may come without copy guards for in-house reproduction. Public domain software will more often than not require that local copying be done immediately to insure against loss due to damage or vandalism. At any rate, blank disks will be needed to make the required backups. In some instances, this may require several disks, since the number of disks necessary will vary with the size of the database. The County and City Data Book, for example, consists of 33 disks, and the Chronicle Data Service has 20. The quality of the blank disks is not

a secondary issue. To insure that the backup copies have an extended shelflife, the MRDFs should be reproduced on premium brands of disks. Some generic disks have proven to be short-lived mediums of preservation. Finally, the library should not supply blank disks for user wishing to copy public domain databases, or for any other personal copying. Since the CD-ROMs and laser video disks technology are still only read-only technologies, they cannot be copied.

Making a steady supply of paper available for MRDF computer printers may be of even more importance if there are no public access terminals for use of the data files, or if there are only a limited number of terminals. Heavy use of a database will make having an efficient, high-speed printer at the MRDF station a necessity. If there is a reference service MRDF computer station, the ability to print data quickly will improve reference service. Public access computers must have high-speed printers to insure steady turnover of users at the terminals. Whatever the circumstance, adequate supplies of paper for the MRDF computer printer will help maintain fluid and acceptable levels of service to the users of databases. Copying of data is also possible with digitally accessible and interactive laser video technology.

Summary

The purpose of this section has been to give a brief overview of the kinds of hardware for MRDFs presently

available. Given that circumstance, discussing the kinds of hardware most useful for that software and their possible in our library leads to the following conclusions:

- That the initial step towards developing an MRDF facility in the library will be the investment in a microcomputer and essential peripherals such as a printer and disk drives. Further, the basic computer should be a flexible piece of equipment, adaptable to additional components such as interactive laser video disk players and CD-ROM disk drives when such adaptations are necessary;

- That the commitment to an MRDF facility in any unit of the library will entail costs beyond that of merely purchasing a computer its components, and software packages. It also means that space, furnishings, supplemental supplies (security devices, and paper, ribbons and cartridges for printers) will also be an absolute necessity. Careful consideration also should be given to the need for machine maintenance and repair costs. Security of the equipment and software is vital;

- That when dealing with the technology needed for using MRDF, an essential factor is to avoid overcommitment to any technology that cannot be adapted to meet the swiftly changing nature of the area;

- That costs for MRDF hardware may not decline in the same fashion or at the same rate as the software;

- And, that with MRDFs there always will be an inseparable connection between the information available on the software format and the quality and durability of the hardware used. Committing to MRDF formats means commitment to a rapidly changing set of costly technologies.

ACQUISITION AND CATALOGING OF MRDFs

The Acquisitions and Cataloging Departments will play an important role in making machine-readable data available to the public. This section identifies basic considerations for the technical processing of such material, and makes recommendations for their expeditious handling.

Acquisitions

Although many procedures for the acquisition of MRDFs will parallel those used for the acquisition of printed materials, some additional considerations are necessary prior to the placement of the order and after its receipt.

To begin with, any order for an MRDF needs to be clearly identified as such. The task force recommends use of a stamp to designate these materials, and further suggests that all such orders be marked "Rush-Quick's" to ensure direct ordering, quick followup, and prompt handling. In addition, the selector needs to state clearly on the order card the number of disks, their physical dimensions, and existence of any accompanying print documentation. (A sample order card is included in Appendix 6.) In many instances, order information for MRDFs may not be as easily found as for printed titles; whenever possible, the ordering unit should supply additional information (e.g., publishers' advertisements and reviews) to facilitate handling of these orders.

It will also be necessary to indicate whether the material being ordered is in the public or private domain. Material in the public domain is not protected by copyright and generally does not require any special licensing agreement. Public domain MRDFs can be copied without restriction. Commercially published materials, however, may not be copied. Their use may even be restricted to a single location and, in some cases, even to a specific machine. Acquisitions staff will need to recognize this distinction when dealing with duplicate orders for public domain materials. For example, if orders were received from both BA/SS and the Planning Library for the County and City Data Book, a $444 U.S. Census Bureau source in the public domain, there would be no need to order two copies. Instead, one unit could purchase the set, and the other could supply blank floppy disks to make a copy. The savings in this instance would amount to almost $400.

Searching of MRDF orders would also be enhanced if all such orders were directed to a specific person in the searching section of the Acquisitions Department.

Upon receipt of an MRDF, several steps are required to inspect that order. In addition to examining the invoice that accompanies each order, it needs to be determined not only that any accompanying printed documentation is included, but also that the disk contains the data which was actually ordered. This last step requires the use of a microcomputer and a certain level of technical skill. For example, an order was recently placed for certain sections of the U.S. Census Bureau's 1981 County Business Patterns, twelve disks in all. When this order is received, it will need to be carefully examined in order to determine that the data sets ordered--all Southeastern, major industrial, and certain other states--were actually copied.

Discussion with librarians at other institutions reveals varied ways of handling the inspection process, but the one most favored seems to be to have the acquisitions department responsible for examining the invoice and other paperwork accompanying the order, but to have actual inspection of the software itself be the responsibility of the MRDF unit.

It seems particularly important that a specific person in Acquisitions be designated the recipient of all MRDF orders. This would speed handling of such materials and would lessen the liklihood of the inadvertent opening of the disks themselves. (Some commercial publishers contend that by merely opening the shrink-wrap in which the disks are wrapped, the purchaser is legally obliged to abide by stipulations they have made regarding use.)

Recommended procedures to be followed by the Acquisitions Department in placing and receiving MRDF orders are outlined in Appendix 6.

Cataloging

Cataloging practice concerning MRDFs varies considerably and is in a state of flux. At the University of Florida minimal cataloging is done by reference staff. At the other extreme, Sue Dodd, a nationally recognized expert on the cataloging of MRDFs, recommends that data files not only be fully cataloged, but that the cataloger should take on additional responsibilities as well, including inspection of the material upon its receipt, and making archival copies when necessary. This, she contends, would ensure that the entire MRDF would be kept together and retain its integrity, thus enhancing the level of cataloging provided.

The task force feels that machine-readable data should be treated much as any other type of library material, that standard cataloging procedures should be followed, and that "Guidelines for Using AACR2, Chapter 9, for Cataloging Microcomputer Software," should be used in conjunction with AACR2, Chapter 9. Further, Library of Congress subject headings should be assigned.

In other ways, handling should parallel that given to audio-visual materials. In the Academic Affairs Library, audio-visuals and microforms are not assigned Library of Congress classification numbers, but are instead given a number based on location and accession number. The task force proposes that machine-readable data be classified in a similar way, that is, with the designation "MRDF" followed by the number for a specific location and an accession number. (A sample is included in Appendix 7.)

Although the task force sympathized with Ms. Dodd's plea for keeping all paperwork, software, and accompanying documentation together so that the cataloger could have the maximum available information, it felt that adding the tasks of physically inspecting and making copies of the software to the cataloger's other responsibilities would be neither fair to the cataloger nor the most expeditious way of handling orders. As mentioned in the preceding section, the task force felt that a better allocation of responsibilities might be for the MRDF site to assume responsibilities for inspecting and making backup copies of MRDFs, returning everything but the backup copy to the cataloger when the order had been determined to be satisfactory. (The full range of procedures for cataloging MRDFs is outlined in Appendix 7.)

LOCATION, SERVICE LEVELS, AND STAFF

Location

The task force identified the following requisites for any physical site(s) designated for the use of machine-readable files:

1. The area(s) must be physically secure to protect hardware and software from theft, vandalism, and damage from food and drink. Such security implies that the area can be easily monitored and supervised.

2. The area must have adequate space for housing hardware, any required software, and supplies and spare parts for operation and maintenance, as well as any accompanying documentation needed to access data. Further, provision in this area should be made for producing and housing archival/backup copies.

3. Since location of this equipment and these materials will determine levels of service to some degree, the area(s) should be proximate to other public service areas where personnel are available. Moreover, relevant printed sources needed to use MRDFs should be accessible.

4. In addition to adequate space, the designated area(s) must meet any special requirements of equipment and storage devices, such as temperature and humidity controls, as well as have the necessary electrical wiring.

5. Because the ideal location for the area(s) would be near other public service units, some provision must be made for keeping to a minimum the noise level of operating equipment, especially printers.

6. The location must accommodate software storage and circulation, including provisions for inspecting returned material to determine that it has not been damaged or altered.

7. Lastly, given the rapid development of computer-storage technologies, the area(s) designed as MRDF site(s) should allow for probable expansion as the collection grows and the level of service increases.

Based on these criteria, the task force visited and evaluated the following locations:

1. IBM Software Development Project room (Davis, 2nd floor)
2. Epigraphy room (Davis, 2nd floor)
3. Microform Reading Room (Davis, 2nd floor)
4. Humanities Annex area at top of stair-well (Davis, 2nd floor)
5. Computer search room in BA/SS (Davis, 1st floor)
6. Phonefiche area in Humanities (Davis, 1st floor)
7. Central carrel area in Reference Room (Davis, 1st floor)
8. Graduate Reading Room in the stacks (Davis stacks, floors 3-8)
9. Area on second floor above BA/SS Desk (Davis, 2nd floor)

10. Carrel area outside Software Development Project room (Davis, 2nd floor)

11. Information File area in BA/SS (Davis, 1st floor)

12. TRLN Office area (Davis, 1st floor)

13. Area adjacent to Non-Print Department (UL, 1st floor)

14. Area adjacent to Reference Desk (UL, 1st floor)

15. Reading Lounge (UL, lower level)

16. Special Collection area adjacent to Reading Lounge (UL, lower level)

Although no single area met all the criteria to the optimum, the task force judged that the two most suitable sites in Davis Library were the computer search room in BA/SS and the TRLN Office, which will be vacated when renovation of Wilson Library is completed in 1986. The most suitable site in the Undergraduate Library was the area adjacent to the Reference Desk. (A detailed assessment of each of the sites mentioned above appears in Appendix 8.) The task force did not think it appropriate to include departmental libraries in its deliberations since conditions (space, available hardware, the existence of software in the appropriate disciplines) vary considerably. However, the task force does suggest that departmental libraries use the principles set forth in this report when considering the establishment of MRDF sites or the purchase of machine-readable data.

The task force believes that the research nature of the library precludes the development and sponsorship of a computer-literacy program, a responsibility clearly belonging to the recently established Microcomputing Support Center. Any library service related to machine-readable data should flow from the research character of the institution: acquisition of and access to instructional, reference, and research materials on magnetic and optical disk. (Data files on magnetic tape presently are the responsibility of the Institute for Research in Social Science Data Library.)

On the basis of this premise, the task force identified two factors determining the level of service which can be provided. The first of these, location, has already been addressed. The second determinant is staffing. These factors are intrinsically linked, since locating this site near other public service areas would allow convenient access to staff and to other reference sources.

Service Levels

At the practical level, access to machine-readable information has the following components:

1. Operation of the hardware. This involves turning on the equipment, booting the machine, inserting the disk, and so forth, and it is somewhat comparable to instructing users in the user of a microfiche reader to view the serials fiche.

2. Check-out and check-in of software, data disks, and documentation from the secure area(s). These procedures should include the inspection of returned materials to insure their integrity. In instances where data disks are accompanied by printed materials, procedures should insure that disks are not erased by any electronic detection device.

3. Identification of software programs and accompanying documentation needed to access data if such programs are not already incorporated into the data storage device. Should a particular machine-readable file require other printed sources, acccess would be contingent on the location of the MRDF service area. This aspect of service will become more sophisticated as staff become more knowledgeable and skilled in facilitating access, utilization, and manipulation of machine-readable data.

The task force recognizes the importance of developing a strong referral and support network among library units. The MRDF service area staff will need to work closely with reference staff so that users can be referred most directly to the appropriate unit or agency for their information needs. The task force views this referral network as essential to serving user needs. The referral network may extend beyond the Academic Affairs Library and its units to computing groups throughout the university, for example, the Health Sciences and Law Libraries, the Microcomputing Support Center, and the Institute for Research in Social Science Data Library.

From a staff point-of-view, a strong referral network can serve both as an incentive and as a support to a highly dedicated staff. In this respect, the library can reflect on its recent experience with the introduction of microcomputers to its internal operations. This phenomenon increased internal communication among staff, channeled staff energies toward positive problem-solving, and provided incentive and opportunity for professional development. Indeed, the task force has some expectation that the development of an MRDF service center may produce analogous benefits to staff as they address user needs for machine-readable information.

Of course, any increase in service is dependent on the availability of staff who have the motivation, expertise, and appropriate training. Increased service means having trained staff who know how to identify what the user wants to know, where that information is stored in machine-readable form, and how to retrieve or access that information. At this level, service can be compared to the role public service staff play in facilitating use of the traditional print collection. As such, it is considerably more sophisticated than the minimum level described above. At its optimum an MRDF service would proceed from mere access to facilitating analysis and interpretation.

From its investigations, the task force anticipates that the level of service may be expected to increase both in quantity and degree with staff development. The task force believes that the wisest course would be to initiate the service at a minimal level, perhaps limiting it to certain times during business hours, and then increasing it as feasible.

Staff: Number and Qualifications

To implement a fully functioning MRDF service will require additional staff, or the assignment of additional responsibilities to currently existing staff. These functions would fall into the following areas, and would include for each the development of policies and procedures:

1. Collection Development (implementation of policy based on established criteria, selection of data files with appropriate software and documentation; assessing licensing agreements and handling the same;, collecting catalogs and reviewing sources for selection purposes).

2. Acquisition (establishing order procedures; identifying producers and suppliers; establishing procedures for the receipt of materials and their routing).

3. Cataloging (interpreting and applying cataloging rules for various machine-readable formats and collaborating with the site representative to ensure the integrity of materials.)

4. Circulation (check-out and check-in of materials at MRDF service area; insuring the proper handling of materials as well as their housing and storage; inspecting materials after each use to determine that they have not been damaged or altered in any way).

5. Technical user assistance (assisting user with the basic operations of hardware; handling routine maintenance of hardware; monitoring service contracts; handling routine maintenance of storage devices such as refreshing tapes to prevent print-through; insuring that data files are copied to new storage devices when their present medium reaches obsolescence; monitoring the shelf-life of backup and archival storage media; insuring adequate supplies of paper, ribbons and other consumable supplies for the operation of equipment).

6. Reference user assistance (interviewing user to assess information needs; determining which MRDFs should be consulted; developing expertise about available data files, their programs, and supporting documentation; establishing and utilizing a referral network with other public service areas, and with other campus libraries and university units; publicizing the availability and use of machine-readable data files; selecting reference materials which will support the functions of the MRDF service; facilitating bibliographic access to machine-readable data).

As outlined, these functions will require the judicious selection of professional, technical, and support staff. Given the current level of staffing and budgetary limitations, the likelihood of creating a new, adequately funded service unit is not realistic. What seems almost certain in the present circumstances is that existing staff will have to assume added responsibilities if the service is to be initiated. Ideally, these persons should jointly combine library and technical skills, and the requisite knowledge and managerial flexibility needed to implement the service. Until staff have developed some background and a degree of confidence service should be kept to a minimum.

Toward this end the task force recommends that at its inception the service be limited to a set schedule, perhaps several hours on weekdays, with a gradual increase to regular business hours (e.g., 8:00 am to 12 noon, and 1:00 pm to 5:00 pm). In terms of scheduling, this service seems similar to online searching, which is normally offered only on weekdays.

In addition, the task force recommends that the initial staff be provided with any intensive training opportunities that can be identified and the necessary time to devote to the implementation of this new service. If at all possible some funds might be allottted for training and for travel to and consultation with professionals at other libraries and/or data archives.

CIRCULATION

Most libraries that make disks available to their users require that such disks be used on site. There are several reasons for this stipulation. First, the disks themselves are extremely fragile. Although they are not immune from damage on site, it is less likely that they will be damaged by food, drink, dust, or any of the other hazards more likely to occur in an unprotected environment. Second, when disks leave the building, there is always a risk of data being destroyed by their inadvertently being passed through the sensitizer/desensitizer by a conscientious (but unknowledgeable) library employee. Third, using the data disk on site means that knowledgeable staff will be nearby to help with problems in using them. Thus, the likelihood of the disks themselves being damaged by untrained or frustrated users who inadvertently write over the data the disks contain is lessened. Fourth, many of the disks produced by commercial publishers have strict regulations about copying and about the location(s) in which their disks may be used. Limiting the use of these disks to on site use would mean that the library was conscientiously attempting to fulfill its part of any contractural agreement. Finally, for disks in the public domain, it seems safe to assume that many users are likely to prefer making personal copies (on their own blank disks) for their own personal libraries of microcomputer software.

As a result, the task force feels that circulation of MRDFs and any accompanying documentation should be limited to on-site use, much as with books kept behind the reference desks. As with books, patrons would be required to leave a library card or some other form of official identification at the service desk, which would be returned to them upon return of the disks and documentation.

Although many data disks contain the programs that are needed to run them, a few do not, and require the use of separate programs such as Lotus 1-2-3. In such instances, the necessary program disk should be checked out along with the data disk and supporting documentation. Program disks purchased by the library specifically for the support of data disks should not be circulated by themselves for personal use; patrons who wish to use software for personal use can check out such programs at any of the microcomputer clusters on campus run by the Microcomputing Support Center.

Although most commercially published disks come with backup copies (and, indeed, are copy-protected so that no additional copies can be made), those in the public domain require that backup copies be made. In both instances, the archival copy should be housed separately from the copy for public use. Should the copy for public use be damaged or destroyed, the unit housing the MRDF will be responsible for a) making another public use copy from the archival copy or b) ordering a replacement copy from the publisher.

The task force suggests that any unit responsible for housing MRDFs should put into writing, with the approval of appropriate library administrators, a policy regarding circulation of such materials. Such a policy would appropriately cover the following:

1. MRDFs normally circulate only on site. Any exception to this stated policy should require the approval of the unit's director or department head, and would only be given under truly exceptional circumstances and never when it constitutes a violation of copyright or licensing agreements.
2. Copying of public domain disks would be permitted, but would require that the library user supply the blank disks needed, and that the user do the actual copying. This would be analogous to patrons paying for and doing their own photocopying.
3. Borrowers should be required to leave identification in order to use documentation and software.
4. The policy should also cover fines and replacement costs.

COPYRIGHT AND LICENSING

Because machine-readable technology has been changing so rapidly, copyright and licensing issues have not yet been resolved either in law or in practice. This section describes the situation to date as it applies to libraries.

Copyright

Copyright is defined by Federal law and ensures a vendor's or producer's right to payment for works produced. It defines the conditions under which software may be copied. The Fair Use provision of the Copyright Law regulates reproduction of a work as well as making of archival copies, when such are not provided by producers. It implies that the library and its employees are not held responsible for any copying in an unsupervised area, but that copyright restrictions should be clearly displayed. The task force recommends the following:

1. The library should post notices of copyright restrictions on the terminals, as well as listing them on disks.
2. Staff should keep apprised of developments in this area.

Licensing

Licensing is governed by state law. It refers to the vendor restrictions on how the disk may be used by a purchaser. Ordinarily, a purchaser is required to sign an agreement stating that he will comply with these restrictions. Some producers contend, however, that removing the outer packaging, a tough, clear plastic film called shrink-wrap, is tantamount to signing an agreement. Legal opinion varies about the validity of "shrink-wrap licensing." To date, the matter has not been resolved.

Another form of licensing directed towards institutions is called site licensing. These licenses vary considerably. Some allow for unlimited copying of disks, while others limit use to a single, specific location. Site licensing has become increasingly widespread because it minimizes copyright problems.

The task force recommends:

1. As with copyright, staff should keep abreast of developments in this area, and the MRDF unit should keep in touch with the Micro-computing Support Center and the University Lawyer.

2. The responsibility for determining what licensing requirements, if any apply to a particular MRDF rest with the unit placing the order.

3. No order should be placed for an MRDF unless that unit has determined that the library can comply with licensing requirements.

Academic Affairs Library
University of North Carolina at Chapel Hill

APPENDICES TO THE REPORT OF THE TASK FORCE ON MACHINE-READABLE DATA FILES

October 3, 1985

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Appendix 1

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Appendix 2

SPECIFIC EXAMPLES OF MRDFs PRESENTLY/SOON AVAILABLE

Floppy Disks--Reference/Research

Art.of.the.State Demographic Diskettes. NY: CACI. $395 for single disk; $195 for additional disks. Operates on Lotus 1-2-3, dBase II, and dBase III.

"State or ADI ZIP code and tract demographics for your micro" includes '80, '85, and '90 population; '80, '85, and '90 households; '85 age distribution by 10 age cohorts; '80, '85, and '90 household income; distribution of income by 7 income cohorts (%); average index; savings, loan; apparel, footwear, sporting goods, grocery, drug, dining out; department store; home improvements; auto aftermarket; furniture. "You get 47 demographic variables and characteristics, including current-year estimates and five-year forecasts for key variables, and a purchasing potential index for 13 products for each state or ADI of your choice. All on one diskette."

CareerSCAN IV. Concord, MA: Orchard House. $169 for program; $84.50 for annual update; $15 for backup disk. Compatible with Apples, TRS-80's, IBM-PC's.

Includes over 800 occupational titles using the Standard Occupational Classification Structure. Intended for middle school through adult users. Used to help people select occupations for which they may be most suited. "Because response time is rapid, the user pays better attention and machine time required for each user is minimized. Average user time to complete a search is 15 minutes. Print options are built in with appropriate instructions for print and non-print systems provided. All instructions for program operation appear on the screen once the search diskette is loaded. An information manual containing program details and suggestions for use is provided for the counselor."

Census of Agriculture, 1982. Washington, D.C.: U.S. Census Bureau. 104 diskettes, can be ordered separately or as package. Custom developed BASIC program on diskette to display the data by data item is available with the Census. Price is $1,308 for the complete set; $60 for the first diskette (the program diskette) and $12 per diskette thereafter. Both a 1.1 and 2.0 version are available for use with PC or XT computers. [There are no other plans at this time to develop the data for any other operating system.]

Diskettes include all published data from the 1982 Census of Agriculture Preliminary Report for each state and each county with 10 farms or more. County and state data items include: farms by size, land use, value of

agriculture products sold, selected expense items, operator characteristics, major livestock and poultry inventories and sales, and selected crops by state.

Chronicle Data Service. Boulder, CO: Chronicle Data Service. Must be used with either NPL Report Writer Information Management System, a personal computer version of a powerful mainframe search-and-retrieval system or with Data Analyst, available from the Chronicle Data Service. Transfer format allows use of Data Blocks from the Chronicle Data Service with many popular database and spreadsheet programs, such as CalcStar, dBase II, Lotus 1-2-3, and SuperCalc3. Prices vary. Titles include:

Administrative and Faculty Employment. Fall '82, Fall '83. $175.
Annual Expenses and Financial Aid (Annual Expenses Fall '84; Financial Aid, Fall '83). $175.
Chronicle Faculty Survey $175.
Includes Earnings of the Profession, 1982-83; 1983-84.
College and University Institutional Characteristics. 1983-84. $175.
College and University Libraries, 1981-82. $125.
Educational and Operating Trends of Academic Departments, 1983-84. $175.
Financial Ratios of Colleges and Universities, 1981-82. $125.
Financial Statistics of Institutions, 1981-82. $125.
Freshman Class Profile, Fall 1983. $175.
Fringe Benefits of Full-Time Instructional Faculty Members, 1982-83. $95.
Gifts for Current Operations, Capital Purposes, Annual Fund, 1982-83. $175.
Graduate Academic Program Statistics by Discipline, 1983-84. $175.
Higher Education Directory, 1984 edition. $150.
High School Characteristics, Fall 1983. $175.
Physical Plant Costs and Staffing, 1983-84. $175
Salaries, Tenure of Full-Time Instructional Staff, 1982-83. $175.
Student Body Profile. Fall 1983. $175.
Survey of Credit Hours Attempted, Academic Years 1981-1982, and 1982-83. $175.
Surveys of Art/Design, Dance, Music and Theater Units in Colleges and Universities, 1982-83. No price.

Data Analyst. $295.
Statistical reporting package for use with any of the Chronicle Data Service data files; provides a broad range of statistical tools, designed for easy use by nonprogrammers.

College Scan IV. Concord, MA: Orchard House. 2 diskettes. $195; backup (archival only) copies, $20. Available for operation on Apples, TRS-80's, and IBM-PC.

"Low-cost guidance information package for students." Covers over 1400 four-year institutions nationwide. Students can choose from more than 350 characteristics in selecting an appropriate school to attend. In addition, College Scan IV permits students to directly print out information on the college of their choice to take home and share with their parents. Printed information includes all characteristics, exact tuition and fees, application deadlines, required tests for admission, and media test scores and high school rankings. Source data on colleges comes from the National Center for Educational Statistics and the College Admissions Data Handbook.

"Low-cost guidance information package for students." Covers over 1400 four-year institutions nationwide. Students can choose from more than 350 characteristics in selecting an appropriate school to attend. In addition, College Scan IV permits students to directly print out information on the college of their choice to take home and share with their parents. Printed information includes all characteristics, exact tuition and fees, application deadlines, required tests for admission, and media test scores and high school rankings. Source data on colleges comes from the National Center for Educational Statistics and the College Admissions Data Handbook.

"All instructions appear on the monitor screen once the search disk is loaded. Instructions for loading diskettes are provided on each diskette, and the system "boots" itself automatically from the first disk. Included with each set of diskettes is a program locator card and an information manual. the PLC contains the names and access numbers for the colleges, the majors, the athletic programs, and the numbers for regions and states which can be entered in a search. The instruction manual for the counselor contains detailed program information and suggestions for use."

County and City Data book, 1983. Washington, D.C.: U.S. Bureau of the Census. [Pricing varies; if disks are purchased selectively, cost is $60 for the first disk and $12/disk for all additional disks purchased at the same time. Other options include the following: All county, city & place data, diskettes, 1-33, $444; all county data, $312; all city data, $132; all place data, $120; U.S. and State totals only, $72. Each includes documentation/software diskette.] Intended for use with IBM/PC or IBM/PC-compatible hardware.

These files provide data corresponding to the 1983 County and City Data Book ($24 in print) giving a broad sample of data from the 1980 Census of Population and Housing, 1977 Economic Censuses, 1978 Census of Agriculture, and data from a number of Federal agencies and private associations.

County Business Patterns, 1981. Washington, D.C.: U.S. Census Bureau. Cost varies according to the disk format; the price for the complete package for a double sided 9 sector disk is $372. Can also purchase "customized packages." Cost is $60 for the first disk; $12/disk for each additional disk purchased at the same time. Disks copied using IBM PC under the PC DOS 2.0 operating system. The data are represented in ASCII, in a compressed, comma-delimited format (which can be read directly by programs written in BASIC and some commercially available software packages).

"This file provides data tabulated by SIC codes on total number of establishments, mid-March employment, annual payroll, and number of establishment by nine employment-size classes. Data are tabulated by 3 geographic summary levels; national (U.S.), states, and counties. This flexible diskette file was extracted from the computer tape file, but the flexible diskette file is limited to 2-digit SIC summaries at the county level."

County Business Patterns, 1982 Diskette Extract. Washington, D.C.: U.S. Census Bureau. Price for entire data set is $550; can also be ordered as "customized" package, with cost of $60 for the first disk, $12/disk for each additional disk ordered at the same time. For use with IBM PC or compatible hardware.

Universe is all business establishments with one or more paid employees. File provides data on total number of establishments, mid-March employment, annual payroll, and number of establishments by 9 employment size classes. Whereas data in County Business Patterns reports are not shown for SIC's with fewer than 50 employees in a given area, there is no such restriction on the diskette extracts.

County Business Patterns, 1983 Diskette Extract. Washington, D.C.: U.S. Census Bureau. Cost is $550 for the entire data set; for "customized" orders, $60 for the first disk and $12/disk for each additional disk ordered at the same time. IBM PC.

Same as for 1982, except data is for '83. [See above.]

Directory of Public High Technology Corporations, 1985-86. Philadelphia: American Investor Information Services, Inc. $395 for 5 floppy disks. MS-DOS/ASCII format. [Also available as a printed directory for $250.00.]

Profiles more than 2,000 publicly traded high technology corporations, including those in the computer, telecommunications, and biotechnology industries. Hundreds of new companies not found in other publications are included. Each profile provides the name, address, telephone number, key management personnel, summary of company products and services, sales, earnings, stock symbol and market, and other financial information. "All material is under copyright protection and can be used only for

information purposes or for telemarketing and/or mailing labels."

Economic Outlook. Paris: OECD. $300/year. 4 disks at present. Published in 2 file formats: DIF (Lotus 1-2-3, Visicalc, Symphony) and SYLK (Multiplan).

"The OECD is to make its information products available in disk format for IBM and compatible microcomputers. The first OECD product to be published both electronically and in hard copy will be the historical and forecast data contained in Economic Outlook. The disks will be published twice a year and will add an extra half year of data with each release. Coverage is from 1970 onwards (depending on the series) and extends to the end of the forecasting period.

Economic Outlook examines in detail the GNP, government accounts, fiscal and monetary indicators, labour markets, wages and prices, foreign trade and international monetary developments in relation to the twenty-four member countries of the OECD. It also provides forecasts for USSR, East European and developing countries."

Subject coverage includes gross national product and its components; government and household appropriation accounts; fiscal and monetary indicators; labour markets; costs, prices, and profits; foreign trade and current balances; international monetary developments for 24 OECD Member countries. 2,000 series in all.

Financial Aid SCAN IV. Concord, MA: Orchard House. $89 for program; $44.50 for annual update; $10 for backup disk. For use with Apples, TR-80's, and IBM/PC's. 1 disk.

Japan Company Reporter; Japanese Corporate Data on Floppy Diskettes. $1,000. [No. of diskettes not specified.] Uses Lotus 1-2-3.

Includes financial statements, spread sheets, and financial ratio databases for 800 Japanese companies.

National Directory of Corporate Charity. San Francisco: RYAP. Shipped in standup library case. Offers choice of IBM-formatted or non-IBM disk format. $100 for IBM; $140 for non-IBM.

Identifies 2500 largest corporations in America, with profiles of 1600 of these, describing their giving programs in depth.

Population Estimates from Federal-State Cooperative Programs and General Revenue Sharing Program, 1982. Washington, D.C.: U.S. Census Bureau. No price given for complete data set; cost is $60 for the first disk; $12/disk for each additional disk purchased at the same time. IBM PC.

...covers 2 sets of estimates. One diskette file contains the 1982 population estimates for counties obtained through the Federal-State Cooperative Program (FSCP). The

other units in the General Revenue Sharing Program; total population (census complete count) as of April 1, 1980; per capita income in 1979 (census sample); July 1, 1982 population estimates; and per capita income estimates for 1981."

Floppy Disks, Instructional

Appletones 2.0. Hanover, NH: Personal Computing Center, Dartmouth College. $4.00 to higher-education institutions. Apple Macintosh.

Music-writing tool that helps teach composition and arrangement using repetition, silence, changes in volume and timbre, 12 pre-defined sounds can be arranged and their duration, timbre, and volume can be changed.

Approaches to Problem Solving. NY: PAL Courseware, McGraw-Hill. [Forthcoming]

Designed to introduce students of many disciplines to the concepts of problem solving.

Classroom Leadership Styles. NY: PAL Courseware, McGraw-Hill. $49.95. Apple II and IBM PC.

Allows students to play the role of a teacher in classroom situations, using democratic and autocratic leadership styles. Designed for undergraduate psychology, education, sociology, and business students.

Contestimation: Developing Successful Estimating Abilities. NY: PAL Couseware, McGraw-Hill. $49.95. Apple II and IBM PC.

Estimation problems in a game-show format. Includes single-digit arithmetic, double-digit arithmetic, triple-digit arithmetic, randomly displayed addition, large-object groupings, small moving objects, and partially exposed objects. For undergraduate mathematics courses or for statistics courses offered in departments of psychology, sociology, or anthropology.

Constructing the Paragraph: the Ramblestones on the Road. NY: PAL Courseware, McGraw-Hill, 1985. $49.95. 2 disks. Instructor/Student Guide. Apple and IBM.

For remedial instruction for students wishing to meet English competency standards at the university level, or for courses in remedial English, English composition, and English as a second language.

Decisions in Child Raising. NY: PAL Courseware, McGraw-Hill. [Forthcoming.]

Presents typical problem situations that occur as parents attempt to guide and counsel children as they grow. Students play the role of seminar leader in a scenario relating to a child raising seminar. Designed for undergraduate psychology and education classes.

Ethical Problem-Solving in the Social Sciences. NY: PAL Courseware, McGraw-Hill. $49.95. Apple II and IBM PC.

Simulation in which student plays a researcher working with people; student must use effective principles of research methodology while maintaining ethical standards and effective human relations. "Appropriate for both undergraduate and graduate courses in psychology, sociology, education, social work, and related social science fields."

Harmonic Analysis and Dictation. NY: PAL Courseware, McGraw-Hill. [Forthcoming.]

Designed to benefit music theory and performance students of all ages. Appropriate for music theory and performance students, composers, and for musicians at all levels. Music hardware required.

Introduction to Language: the Lexicon. NY: PAL Courseware, McGraw-Hill. [Forthcoming]

...introduces students to the basic design features of human language and provides practice in the identification and representation of linguistic elements and rules. Allowing for a wide range of student knowledge levels, this tutorial focuses on the lexicon, one of the important components of human language, and provides a fast-paced, highly interactive learning situation. Designed for undergraduate linguistics, English, and education classes.

IV Meds for Kids: Basic Nursing Procedures. NY: PAL Courseware, McGraw-Hill, 1985. Apple II and IBM PC. $49.95. 2 disks, Instructor/Student guide.

Computerized instruction in implementing a doctor's order for pediatric intravenous medication.

Miranda: Understanding Poetry--Part I, Meter, Rhythm, and Rhyme. NY: PAL Courseware, McGraw-Hill. $49.95. Apple II and IBM PC. 2 disks, Instructor/Student Guide.

Allows students to play a game in which they must answer questions about meter, rhythm, and rhyme.

Miranda: Understanding Poetry--Part II, Alliteration and Assonance, Images, Metaphors, Similies, and Symbols. NY: PAL Courseware, McGraw-Hill. $49.95. For Apple II and IBM PC. 2 disks, Instructor/Student Guide.

Allows students to play a game in which they must answer questions about alliteration and assonance, images, metaphors, and symbols.

Mozart 2.0. Hanover, NH: Personal Computing Center, Dart-Mouth College. $4 for higher education institutions. Apple Macintosh.

A minuet writing program to allow music students to compose a minuet from any of 6 pre-defined 2-measure phrases written by Mozart; the minuet may be played on the computer's built-in speaker.

Music Theory. Columbus, OH: 85 Software Company. $49.95. TRS-80 color computer with extended BASIC.

Programs in major scales, harmonic minor scales, interval spelling, triads, inversions, dominant 7th chords and inversions, and melodic and harmonic intervals.

Nursing Diagnosis: Basic Concepts and Case Studies. NY: PAL Courseware, McGraw-Hill. [Forthcoming]

Designed to help students learn the essentials of diagnosis. Appropriate for undergraduate nursing classes, can also be used to provide remedial training in hospitals for professionals re-entering the field.

Recalling Algebra. NY: PAL Courseware, McGraw-Hill. $49.95. Apple II and IBM PC.

Review course in elementary algebra that includes 22 types of problems.

Reasoning by Analogy: the King Returns. NY: PAL Courseware, McGraw-Hill. $49.95. Apple II and IBM PC. 2 disks, Instructor/Student guide.

Simulation to help student learn how to reason by analogy in simple contrasts and comparisons, in argumentation based on analogy, and in model building. "For philosophy courses and any undergraduate course in which logical thinking concepts play an important role (including courses in psychology, literature, and the sciences....the program helps to teach students how to reason by analogy in simple contrasts and comparisons, in argumentation based on analogy, and in the more sophisticated model building that is part of the scientific disciplines."

SocStat 1.2. Hanover, NH: Personal Computing Center, Dartmouth College. $4.00 to higher education institutions. Apple Macintosh.

A program to compute sociological statistics, using data sets from actual sociological surveys.

Skel 2.4. Hanover, NH: Personal Computing Center, Dartmouth College. $4 to higher education institutions. Apple MacIntosh.

Instructions in and examples of using the basic code for a simple Macintosh user interface.

Spellit. Apple IIc or IIe. $25.

Drills students in correct spelling of common vocabulary words, synonyms, antonyms, proverbs, travel vocabulary, and idioms; available for French, German and Spanish.

Statgraphics. Rockville, MD: STSC, Inc. 1-4 copies with university purchasing order, $350 each; 5 or more copies, $200 each; site license $4,000 (includes 15 copies of documentation and right to purchase more at discount).

IBM PC, PC-XT AND PC-AT.

Does statistical and data analysis procedures, including ANOVA, regressions, industrial statistics, forecasting, and time-series analysis, and produces graphical displays of results. [This may belong in program section.]

Statlab: Mean and Standard Deviation. NY: PAL Courseware, McGraw-Hill, 1985. $49.95. Apple II and IBM PC. 2 disks, Student/Instructor Guide.

"The ideal program to supplement courses in statistics or applied mathematics in departments of psychology, sociology political science, economics, biology, and education."

Ten Common Inferences: the Perils of Oscar, Part I. NY: PAL Courseware, McGraw-Hill. $49.95. 2 disks, Instructor/Student guide. Apple II and IBM PC.

For courses in introductory philosophy, methods of reasoning, or argumentation. ...presents 2 common valid and 2 common invalid patterns of reasoning, with remedial help as needed.

Ten Common Inferences: the Perils of Oscar, Part II. NY: PAL Courseware, McGraw-Hill. $49.95. Apple II and IBM PC. 2 disks, Instructor/Student guide.

Student must answer questions that involve distinguishing between fairly complex valid and invalid inferences; remedial help as needed.

Thin-Layer Chromotography. NY: PAL Courseware, McGraw-Hill, 1985. $49.95. Apple II and IBM PC. 2 disks.

Simulation of running a T.L.C. plate to discover the contents of an unknown solution consisting of 5 amino acids. For undergraduate courses in elementary organic chemistry, quantitative analysis, analytical measurements, or other chemistry courses.

Transportation Management: the Cunning Simulation. NY: PAL Courseware, McGraw-Hill. $49.95. Apple II and IBM PC.

Pits students against the computer in an attempt to manage a physical-distribution system. For undergraduate courses in business management and transportation management.

Hard Disks--Reference/Research

The CorpTech Database. Wellesley Hills, MA: Venture Economics. $4,950 subscription prior to 8-31-85; $7,500 per year thereafter. Must be IBM/PC or IBM-compatible. Requires PC with hard disk.

"Database currently contains information on more than 8,000 companies and will be rapidly expanded to an estimated

14,000 companies with a large update occurring this fall and quarterly additions over the next 12 months." Includes public and private high-tech companies. "CorpTech has developed state-of-the-art proprietary software that simplifies searching. E.g., to complete the following complex search would require just 24 key strokes to specify, and take under a minute to execute. 'Select all private, independent manufacturers of medical ultra sound imaging equipment in the greater Boston area that employ under 100 people.'"

Optical Disks--Laser Disks

Academic American Encyclopedia. $89.00.
"KnowledgeDisc, the videodisk product, is compatible with any standard laserdisk player. Users can either scan or browse the disk frame by frame, or, using the index, can direct the player to specific entries. No microcomputer is necessary.

Optical Disks--Compact Disks--(CD ROM)

Academic American Encyclopedia. $199.
"Searching capabilities in the CD-ROM version, due in October... are far more sophisticated [than laser disk version]. Users can obtain a list of entries containing a key word or group of words in a matter of seconds, thanks to an electronic index almost as large as the encyclopedia itself. Together, however the encyclopedia and index use up only 20 percent of the storage capacity of the 4.72-inch compact disk; GEP president Frank J. Farrell reported that Grolier is looking at other files and applications to put on CD-ROM that can interact with the encyclopedia and with each other." Works on IBM PC when equipped with a special compact-disk drive. [Although not yet available, these hookups are expected to cost ca. $2,000 when they are put on the market.]

ERIC (Educational Resources Information Clearinghouse). Available from SilverPlatter sometime in 1986. 2 archival disks (1966-75; 1976-85) + a separate disk containing cumulated quarterly updates. Ca. $4,000-5,000/year.
Corresponds to online ERIC database, indexing and abstracting publications listed in Current Index to Journals in Education and Resources in Education. See advertisement, p. 49.

LISA (Library and Information Science Abstracts). Available from SilverPlatter sometime in 1986. Ca. $4,000-5,000 per year.

PAIS International. SilverPlatter. Annual subscription ca. $4,000-$5,000. Expected to be available in 1986.

Wide-ranging database providing substantive coverage in the areas of business, international relations, public administration, law and legislation, banking and finance, political science, government, sociology, statistics, and more. More than 225,000 indexed items are supplemented by an additional 24,000 reference each year. These are selected from more than 1200 leading journals plus 9,000 monographs including books, pamphlets, directories and government publications. International coverage includes references in English, French, German, Spanish, and more.

PAIS presently available as a printed index and as an online database through major database vendors. See advertisement, p. 65.

PsycLit. American Psychological Association, PsychINFO Department. Available from SilverPlatter sometime in 1986. Ca. $4,000-5,000/year. 1974- .

Database covers over 1300 journals and monograph series from approximately 45 countries. Does not, however, contain dissertations and certain other categories of materials that are included in the online version of this database. (Database begins in 1967; Psyclit in 1974). See advertisement, p. 62.

HUMANITIES MRDFs

The creation of MRDFs in the Humanities disciplines is underway as well. One such project is described in an editorial note by Helen K. White in "Reference Books Bulletin" (Booklist, Nov. 15, 1984, p. 426) as follows:

> Oxford English Dictionary, the world's most comprehensive and authoritative English-language dictionary, is being computerized... Called the New Oxford English Dictionary the computerized version will make an integrated printed edition of the work possible, and addition of new words and meanings will be feasible. The Press (Oxford University) will be able to make NOED available online, on magnetic tape, on laser/videodisc, and perhaps on a computer chip.

Another endeavor, partially supported by the National Endowment for the Humanities, is the computerization of Domesday Book by scholars at the University of California at Santa Barbara. Exactly how this information will be made available to other scholars is not yet known. But the project will be of inestimable value not only to historians but to historical geographers, economists, and archaeologists as well.

Appendix 3

INTERVIEWS WITH LIBRARIANS AND DATABASE PRODUCERS

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Libraries at UNC-CH

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INTERVIEW WITH CHARLOTTE SLOCUM, PLANNING LIBRARY
August 23, 1985

1. Does the library have any microcomputers for public use?

No, but the dept. itself has used a room next to the library to house six microcomputers for departmental use.

2. What kind are they?

3 Apples
2 IBM PC's
1 IBM PC XT with a modem

3. How many printers are there?

3; 1 for an Apple, 2 for PC's.

4. Who's responsible for looking after the room and the microcomputers?

A shared responsibility. The department has hired 4 grad students who are there during the evening to help students with the programs, get supplies, etc. During the day, faculty are generally available to help with problems in using the software and with programming problems.

The library's role is that it keeps some of the software that is used on permanent reserve, checking it out for use in the microcomputer room. It also holds 2 keys to the room, which is kept locked in the evening. One problem, however, is that any student who checks a key out after 9:00 p.m. (the library closes at 10:00) can keep it overnight. This means he can let friends into the room; this may be a security problem.

Evidently, some people in the department would like the library to take over complete responsibility for the room (without giving them any additional student help). Charlotte feels that this could be a real problem, particularly since only one student is on duty in the library at night, and the library closes at 10:00.

5. Where is the software located?

The present arrangement, which may soon be revised, has some software (e.g., Lotus, VisiCalc, Aida) on permanent reserve in the library, and some in the department's main office. All software documentation, including that for the software on reserve in the library, is kept in the office. Lots of

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problems with this, since the office closes at 5:00. Evidently, at first all of the software and documentation was kept in the room with the microcomputers, but theft was a problem.

6. Have you had any requests for the library to purchase data diskettes?

Yes. County & City Data Book. Also, interest expressed in several real estate, land use software packages. Thinks that most requests/interest, however, will be in public access software produced by the federal government.

7. Do you use stickers on the machines or post signs re: their warning of possible copyright/licensing violations?

No.

8. How do you circulate the floppy disks that you now have on permanent reserve?

Much like a book: make up a card, require that the patron leave student I.D. or driver's license, which is ret'd. at the time the floppy disk is ret'd.

9. Are there any limits on how long any one person can use a microcomputer?

Yes. Students have to sign up for a time. Believes that there is a 4 hour/week per student max. and that the longest anyone can use a PC during one day is 2 hours. Honor system used.

10. Are you asked (and able to answer) any questions relative either the software or the hardware?

Yes. Library doesn't answer questions--don't have the time; have lt'd. knowledge.

11. Do you know if there are any problems with students bringing food/beverages into the microcomputer room?

Yes, a definite problem.

12. Who, ultimately, is responsible for the microcomputer setup as it now exists?

A Computer Committee, composed of faculty and grad. students, with Charlotte as an ex officio member.

13. You mentioned that you anticipated that many of the floppy disks you might order would be those generated

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by the federal government, data sets which would be in the public domain. I know that, in BA/SS, we'd be interested in these as well, and so might other library units on campus--Institute of Government, for example--and even some of the nonAcademic Affairs libraries--the Population Center, Law Library, Health Sciences, etc. How would you feel--this is hypothetical--about some sort of shared purchase of a single data set, with all of the participating units making copies of the data for their libraries? This would prevent unnecessary and expensive duplication of data.

All for it: enthusiastic.

14. Can you think of anything else?

Yes. Hopes the above does not sound as if she is against library involvment with microcomputers and data sets. She is very much in favor of it. Just feels that the department has to work out a system, with staffing and training part of it. Would like to see this as part of the library.

ds
8-27

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COMPUTER LAB - NEW EAST

AUG 30 1985
PLANNING LIBRARY
University of North Carolina

A. LAB HOURS

Monday - Thursday	8am - 10pm
Friday	8am - 5pm
Saturday	10am - 4pm
Sunday	1pm - 10pm

These hours are the same as the library's and the key to the lab can be checked out from the library during these hours. After hours, key must be checked out from the planning library and returned to the library at its scheduled opening time. The key should be left in the book drop outside the library if you cannot return it by the opening hour. Whoever checked key out last overnight will be held responsible for missing or damaged equipment if door is found to be unlocked or open in the morning.

B. COMPUTER RESERVATION

Time must be reserved for use on any of the computers. A reservation log is located outside the lab. This time is limited to three (3) hours in any seven (7) day period. The three (3) hour reservation period may be taken all at once (e.g. 10am - 1pm Tuesday), or segmented (e.g. one (1) hour Tuesday, Wednesday and Thursday). If computer time is reserved it is your responsibility to use it. Ten minutes after the time scheduled, if the person scheduled does not show, that hour becomes open. This ten minute rule applies to each hour you have reserved.

Exceptions to the Three Hour Limit

1. If there is open computer time after you have already used your three (3) hour limit, you may reserve more time subject to being "bumped". The reservation sheets will be checked daily to insure, especially during peak user times, this procedure is followed.

2. This limit will not be in effect after midnight for overnight users - subject to peak user times (e.g. when the computer must be utilized to complete a class assignment that specifically requires computer use).

C. SOFTWARE

All available software can be checked out of the planning library. If it is not returned, you may be liable for replacement cost.

D. PAPER

Paper is not to be wasted. Some paper will be available in the computer lab. If paper waste or excessive use becomes apparent, rationing will be instituted. Be conservative, print only what you will need. If you are producing a term paper or departmental paper you are expected to supply your own paper and ribbon.

E. SCHEDULING

The number of computers is limited relative to the students who wish to use them. Therefore, class assignments should be done ahead of time as much as possible.

F. ASSISTANCE

Assistance will be available week nights - Sunday thru Thursday from 7pm til 10pm. Assistance will also be available some mornings and afternoons. Check the schedule outside the lab for these times. If you think you will need assistance, reserve your time when assistance is scheduled.

G. GENERAL RULES

No smoking, eating or drinking in the lab.

Do not place disks on top of the computer screens. The screens are magnetically charged and may damage or destroy the data stored on the disk.

Turn off the printer before using the handrollers.

Turn off equipment when you are through.

Turn off lights.

Make sure the windows are closed and the doors are locked.

UNC-CH Health Sciences Library

Interview with Sue Stigleman and Diane Foxman

1. HSL is presently establishing files of microcomputer software for use in-house by medical students, faculty, and staff. The software is fully catalogued but use is restricted to the building.

2. They have computers in a PC lab for use by medical school and Health affairs personnel. A proposal for a microcomputer center has been written by Sue Stigleman. A copy will be sent to the task force. [See pp.25-30]

3. Diane Foxman is preparing a collection development statement that will cover selection and circulation.

4. With public service or reference databases, HSL is looking at the development of service such as the laser disk version of Index Medicus. (However, not yet on the market.)

5. Interactive systems--they're still testing a system from Philips that they acquired two years ago using micros and video disks for medical students studying cell structure. The system is still considered just a test. It is set up in the AV section of HSL.

Overall, the MRDF forms HSL is presently focusing on are in-house use of micro software and CAI materials. They do have computers available to make in-house use feasible. They are proposing a microcomputer center. They are developing a MRDF collection development policy which should be ready by October. The model they are using is one established by the Houston Academy of Medicine, which concentrates on internal records, staff development, in-house users and curriculum-related micro software. It is a narrower plan in scope that the one we have. We will receive copies of the Houston plan and HSL's own finished collection plan.

DRAFT FOR DISCUSSION

Deans - Vice Chancellor Meeting
February 12, 1985

PROPOSAL FOR A MICROCOMPUTER CENTER IN THE HEALTH SCIENCES LIBRARY

Background

During the past year, a number of Health Affairs faculty have expressed interest in the possibility of having microcomputers located in the Health Sciences Library for faculty and student use. Several have requested that we purchase specific microcomputer-based CAI (computer-assisted-instruction) software. Others have requested that we place software which they already own on reserve for students to check out and use on microcomputers located elsewhere in Health Affairs.

Increasingly, other health science libraries within the country are taking steps to establish microcomputer laboratories in cooperation with the schools which they serve. Several months ago I asked my staff to consider what unique objectives such a center located in the library would support and what resources would be required to establish one. We agreed on the following points, taking into consideration the library's mission, long-range goals, available space, staff, and budget.

- A microcomputer center located in the library would complement, not replace, other centers that exist or are planned within Health Affairs.

- It is within the library's scope and mission to provide access to microcomputers for course-related CAI and to provide access to microcomputers, as well as training and consultative services, in support of online searching and professional file management.

- Such a center should be implemented in phases, beginning with a relatively small number of microcomputers and objectives, in order to assure adequate user support.

- The library has space for a maximum of 20 microcomputer workstations.

- The library's major short-term contributions towards establishing the center would be space, access to microcomputers during library hours, circulation of software, and overall coordination of the center. Hardware and software could not be purchased from the library's existing budget.

Phase 1: Establish the Center with a Limited Number of Objectives and Microcomputers

Time Period: First year (1985).

Objectives:
1) To provide access to microcomputers and CAI (computer-assisted-instructional) software for selected courses within Health Affairs (perhaps one course in each school).
2) To alert Health Affairs faculty to CAI software of potential interest and to acquire demonstration copies for preview and evaluation.

Hardware: Three IBM PC workstations with one printer, and two Apple IIe workstations with one printer.*

Software: CAI software (see examples in Attachment 1) to support selected courses.

Space: Workstations would be located on the lower level of the Health Sciences Library in the Audiovisual Services section. This space is currently available and is already electrically wired to accommodate a cluster of workstations.

Access: The microcomputers would be available for use by Health Affairs faculty and students during all hours that the library is open.

Support: With existing staff, the library could provide the following support for the center:

1) Perform the record keeping and processing associated with acquiring the hardware and software for the center.
2) Circulate CAI software and manuals to Health Affairs students and faculty for use within the library.
3) Provide written instructions on how to use the microcomputers with CAI software.
4) Monitor security and use of the microcomputers. Maintain statistics on usage.
5) Develop written policies and procedures for use of the microcomputers to ensure access to the students enrolled in the courses for which CAI software is purchased.
6) Identify new CAI software of potential interest to faculty, and arrange for faculty to preview and evaluate the software for possible purchase.

*Minimum of 5 workstations and maximum of 10 suggested for Phase 1. Final decisions on brand and configuration of hardware will depend on compatibility requirements of software selected for the center.

7) Perform preventive maintenance on hardware.

8) Arrange for repair of hardware if needed.

Planning for Phase 2:

1) The library will evaluate usage of the center at the end of the first year and make recommendations to the vice-chancellor and the deans on the center's needs for future support of microcomputer CAI.

2) The library will design a training program and follow-up consultation service which would allow the center to expand its objectives during Phase 2 to include microcomputer-based online searching and professional file management.

Costs: Estimated total of $40,000 in capital expenditures for the first year (includes hardware, furniture, security devices, and software to support selected courses).

Breakdown of costs:

Five microcomputer workstations (including furniture) at an estimated average cost of $5,000 each.....	$25,000
CAI software to support specific courses (two to three copies each of the type of software listed in Attachment 1).....	15,000
Estimated TOTAL	$40,000*

*Cost would double if 10 rather than 5 workstations (and accompanying software) were acquired.

Phase 2: Expand the Number of Objectives and Microcomputers Based on an Evaluation of Phase 1

Time Period: During the second and third years (1986-1987).

Objectives:

1) To increase the number of courses for which CAI software is purchased, based on expressed need from the schools.

2) To provide Health Affairs faculty and students with access to microcomputers and selected software for online searching and professional file management.

3) To provide Health Affairs faculty and students with access to demonstration copies of a variety of software for online searching and professional file management.

Hardware: Add a maximum of five additional workstations.

Software:

1) Additional course-related CAI software as recommended by Health Affairs faculty.

2) Major communications software packages used for online searching (e.g., CROSSTALK, PC Talk).

3) Major menu-driven software packages which facilitate online searching of commercially-available databases (e.g., IN-SEARCH, Sci-Mate Universal Online Searcher).

4) Major file management software packages used to store and manipulate bibliographic data (e.g., Sci-Mate Personal Data Manager, FYI 3000, PFS:File and Report, PC File).

5) Demonstration copies of a variety of communications and file management software.

Space: Same as for Phase 1.

Access: Same as for Phase 1.

Support: In addition to those listed for Phase 1:

1) Workshops taught by library faculty on microcomputer-based information management and online searching (already offered by the library).

2) Follow-up consultations with Health Affairs faculty and students who have attended these workshops and are interested in conducting their own searches and maintaining bibliographic files on a microcomputer (not yet offered as a formal service.)

3) Schedule existing group study rooms for use by Health Affairs faculty who wish to consult with students in the library about microcomputer applications.

Costs: Estimated total of $40,000-$50,000 depending on the amount of software purchased.

ATTACHMENT 1

EXAMPLE OF CAI SOFTWARE IN WHICH HEALTH AFFAIRS FACULTY HAVE EXPRESSED INTEREST

	Title	Producer/Distributor	Subject	Cost
A.	Micro-micro	MacMillan	Microbiology 35 lessons	$ 350
B.	Microcomputer Software for Medicine: A Self-Instructional Series	University of Missouri-Kansas City School of Medicine	Medical Statistics 8 lessons Clinical Science 6 lessons	500
C.	Nebraska Clinical Dental Simulations	University of Nebraska	Dentistry 17 lessons	3,400
D.	The Nursing Process	Medi-Sim	Nursing 5 modules	900
E.	MED-CAPS	Health Sciences Consortium	Pediatrics Family Medicine	1,500
F.	The Dine System	C.V., Mosby	Diet Analysis	100
G.	Drug Master	Medical Software Consortium	Pharmacy Pharmacology	1,500

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Interview with Ray Jones, University of Florida Library
August 23, 1985

1. I know that your library collects magnetic tapes and some diskettes as well. Are you collecting machine readable data in any other format?

The library has online direct access to several databases produced by the State of Florida. This includes Division of Economic Development statistics regarding the economy and trade, Florida Occupational Information Service data on employment, and Dept. of Tourism statistics. The library looks on these as state documents in yet another format. Also available is the census for Florida for 1980; plans are being made to put the 1980 Census of Population (Florida only) online as well. Library has expressed interest in serving as the intermediary between the patron and these various state databases, which can be accessed by a "defined" or, no terminal. [I'm not sure what a "defined terminal" is. I asked if it was the same as a dedicated terminal, and he said not, that it could be used for other things as well as searching state databases.]

The library has also acquired the MARC records on compact disc. Purchase was recommended by the library's Committee on Machine Readable Data, primarily for purposes of experimentation, learning about data on compact disc. Access is by author and title only, no subject access. Jones was not particularly pleased that the MARC records are housed in Acquisitions, since, he claims, they are not using them.

Jones also mentioned that HRAF has plans to put its files on compact disc, although he had no idea how far off in the future this was. He said that he's also seen advertisements for marketing data--mapping, statistics, etc.--available on compact disc. He had not, however, heard of the SilverPlatter project.

NOTE: QUESTIONS 2-30 REFER TO MICROCOMPUTER DISKS, ALSO REFERRED TO AS DISKETTES AND FLOPPY DISKS.

2. You mentioned last week that you have the 1983 County and City Data Book on floppy disks. Do you have any other publications in this format? If so, what are they?

a. 1981 County Business Patterns.

b. In addition to the raw data on the County & City DB rec'd. from the Census Bureau, also have some reformatted files based on it--one, from Princeton

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University, the other by a U. of Fla. graduate student, which uses Lotus 1-2-3 to present the data in a sort of spreadsheet format. This last file is very popular with library users.

c. About $1,000 worth of instructional diskettes in the sciences. These are kept in the Physics Department, in a room near the Physics Reading Room. These include books which include diskettes as well as diskettes which were purchased separately. Although these titles are held in the Physics Department, the library purchased them.

7. Are you collecting instructional disks in any other subject areas, such as music theory, languages, simulations, etc.? What do you think the library's role in collecting these materials should be?

Thinks collecting in this area is a good idea and appropriate for libraries. In addition to material in physics and sciences, described above, library is being given a collection of floppy disks rel. to language studies. Only problem is a philosophical one. If an instructional disk is a substitute for the course's major text, thinks perhaps library should not collect. Has not really thought about this, however.

8. What about program diskettes for public use?

Faculty Support Center, which teaches the use of PC's and program software is really responsible for this. Library does not collect program disks; this is something they have avoided.

9. Do you have a written collection policy which defines what you will/won't collect?

None at present; will probably develop one. Library has just started a collection development management plan. [Did not determine whether this is lt'd to MRDF or collection development in general.]

Jones feels, however, that the library should get involved only with major collections of data, such as the County and City Data Book, not try to collect "interesting bits" of ephemeral software. He feels collecting them would be equivalent to collecting and keeping xeroxed articles. Problems of bibl. control and cataloging.

When I asked him how he felt about the stipulation that is in Jack's policy about not acquiring data on diskettes through the mail (i.e., mailing a blank

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diskette to the producer, getting it back with the data on it), he agreed. Thought library should not acquire these items, that they fell into the category of ephemeral materials described in the preceding paragraph.

6. Where do you keep/store disks?

a. Some disks, as mentioned previously, are kept in the Physics Department, adjacent to the Physics Reading Room.
b. The computer room, part of the Reference Department, is the home of the other data diskettes, such as the County and City Data Book. This is also where the documentation is kept.
c. Archival copies of all disks are kept in the Systems area of the library.

7. Do you have any public access PC's in the library?

Not really. There are no PC's specifically designated for public use. If a person wants to access, say, the County Business Patterns on diskette, a reference librarian (usually, almost always, Ray Jones) brings him/her to the reference PC and acts as an intermediary. In other words, the librarian is always present.

8. Since accessing data on diskette may be rather time-consuming, particularly when you're helping someone use it for the first time, do you require that the patron make an appointment, much as he might to for an online search?

Yes, almost always.

9. How difficult is it to get to the PC? You've mentioned that you use it for online searching and for departmental use.

Very difficult. Sometimes may take a day or two to sign up for a time to use it.

10. What happens if a person comes in and wants to make a copy of a public access data diskette such as those issued by the Census Bureau?

If the reference PC is free, will make a copy of the disk there; otherwise will send the person to library systems office--usually can get immediate copying done there.

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11. Do you require that the patron provide the disk onto which a public access file is to be copied?

Yes, in most instances. Only exception would be when initiating this service with a particular academic department; might in that instance provide a "free" copy for good public relations.

12. What do you recommend for storing the disks? Do you think large boxes (which store 50-100 disks) or the smaller boxes (usually store no more than 10) are better?

He prefers smaller boxes. Easier to find what you need. With larger boxes, pulling out wrong disks.

13. Do people access data diskettes in the library, or do they check them out?

Really only two options: (1)have a personal copy made (assuming public domain software; (2)make an app't. w. Ray Jones and access using Ref. Dept. PC.

14. What do you think of the idea of having a cluster of public access PC's specifically designated for use of library-collected software?

Very much likes the idea. Good thing for the library. Likes the idea of collecting and making available, particularly on-site availability through hardware. As compared to computer tapes, which are rather elitist, diskettes more accessible. Tapes require both specialized computing/programming skills and sizible am'ts. of money. Disks would be much more for "the masses."

15. One of the things our collection policy draft states is that no library unit should acquire diskettes for which it does not have the required hardware and software programs. How do you feel about this?

Strongly support this idea. Most of the things available now are for IBM PC's. All of the Census Bureau material, for example, are for IBM's.

At U. of Fla., did buy some things for Apple, because Physics Dept. had Apples as well as IBM's.

16. How do you handle requests for copying public access material?

Either bring to Ref. Desk or to Systems Office. [See #10.]

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17. Do you ever charge out a data diskette?

No.

18. If a library were to circulate diskettes, do you think it would be necessary to inspect the ret'd. disk to determine that data had not been changed, erased, etc.?

Yes, it probably would be necessary. Analagous to examining tapes which circulate. This is one of the reasons why the library will not circulate the data disks.

19. How do you handle illegal copying? Isn't this a problem, particularly since some tapes are at a remote location?

Not a problem w/public access software. With instructional disks in Physics Department, just assume that legal use is being made. No stickers on machines or signs warning about illegal copying.

20. Who selects these materials? What selection tools are used?

Ray Jones, the Social Sciences Reference Librarian, has primary responsibility. He makes selection of these items, and then his recommendations go to the Machine Readable Data Cmte. (a library cmte.) for its approval. So far, they have not vetoed any of his suggestions. "I propose, they dispose."

Uses the catalogs of Federal agencies and Data User News to identify federally-produced disks; newsletters from IASSIT and APDU (Ass'n. of Public Data Users) and ICPSR. Also word-of-mouth.

21. Are there any problems/special circumstances regarding the Acquisitions Dept.'s role in acquiring these materials that we should know about?

First, have to determine the parameters of the data diskette being considered. This requires someone with a certain level of technical expertise. At Fla., Jones normally consults with library systems person about this. Feels also useful to have person in Acquisitions who's had some training and/or interest in this area.

22. In our Acquistions Department, we have an inspector who examines the materials we receive to make sure that we've gotten what we've actually ordered. In acquiring data diskettes--e.g., selected areas for the County & City Data Book--it may be necessary to

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look at the disk using the PC to determine that what you've received is what you've ordered. Does someone in Acquistions do that in your library? What is their role? What is yours?

Acquistions simply looks at paper which accompanies the order; then the disk goes to the Systems Office, which determines that it's OK and then makes an archival copy. They then send the disk to the Reference Department, where it is stored in the Computer Room. Acquisitions sends the documentation which accompanies the disk directly to the Reference Department, which makes a copy of the documentation as an archival copy.

23. Could you describe cataloging and bibliographic control?

Very limited cataloging of disks is done by one of the reference staff, not by the Cataloging Dept. The Ref. Dept. also has a notebook which contains a list of MRDF's held, along with abstracts. [I asked Jones to send me a copy of a page from the notebook; he agreed.]

24. We've seen several advertisements for commercially published diskettes. In some instances, specific licensing requirements are included with descriptive information in the advertisements, but in some instances, they are not. In the latter situation, what do you do/recommend?

Feels a team effort is required, involving the systems person, the Soc. Sci. Ref. librn, Acquistions, and Reference. All need to work together on this, and it is a team effort, but usually one person--the person who generates the order--that does the most work. This is usually the reference librarian.

Feels very strongly that need to determine the restrictions in advance, before actually ordering title. Feels that Acquisitions might have a stronger role in this.

25. Do you have any other restrictions on what you will and won't collect?

Won't collect illegal software.

26. How do you determine if software is illegal?

Usually the systems person is the one who does this. E.g., lib was offered something that used software on use-restricted program; Systems person determined that it was an illegal use, and lib. turned down.

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27. You've mentioned that science instructional materials are kept in a different location from the data diskettes in the library. What would you think of an arrangement which kept instructional disks in the Undergraduate Library (where nonprint and reserve materials are housed) and data disks in the Grad. library, where the corresponding printed material is kept?

Likes the idea. At Fla., there is no undergrad. library, so this is not an option.

28. What can you say about the skills staff must have in order to provide good assistance in the use of diskettes, particularly data diskettes?

If the data is fairly simple, a well-trained ref. person can provide good assistance. There are times, however, when the assistance provided by a reference librarian is not enough, and someone with technical expertise is necessary. In these situations at Fla., the lib. user is referred to the systems office.

29. Are you saying, then, that the library should not collect complicated/difficult diskettes because its staff may not be able to provide the right level of service?

No. Thinks it's OK to collect this material even if can't provide sophisticated assistance in its use. Compared to complicated statistical sources in print; librn. may simply lack the skill to help patron perform statistical manipulations, etc. In this kind of situation, important to be honest about personal/professional limitations.

30. Do you have anything else you'd like to add, or any questions you'd like to ask me?

Wishes that we would form a group in the Southeast to discuss these issues; communication important.
Invited any TF member to attend '86 ALA meeting at whichhe would be speaking about Fla's. collection management plan for MRDF's, particularly if we had a policy in force by then. Also expressed interest in getting a copy of our collection development policy.

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REPORT ON CALL TO THE UNIVERSITY OF MICHIGAN
September 16, 1985

Called Reference Dept. to see if they were collecting or providing access to MRDF. They referred me to David McDonald, who is in the library's Systems department.

When McDonald returned my call, he said that there had been a committee/task force which had looked at MRDF, but that he had not been on the committee. He sounded, though, as if they were looking primarily at the collection of instructional ("how to's") disks and software. He said that he would check to see if he could send us a copy of the report, and if so, would mail it to us.

NOTE: A copy of the draft, minus accompanying attachments, follows on pages 39-44. A copy of the draft with attachments can be borrowed from the task force chair.

[University of Michigan Library]

July 10, 1985

TO: Mona East

FROM: Task Force on Software Policy
James Crooks
Edna Laughrey
Barbara MacAdam
Bill Manspeaker
Charlotte Wolfe,
Maurita Holland, Chair

RE: Final Report

The rapid pace of microcomputer deployment around the University campus and in the Libraries both for staff and patron use necessitates a University Library policy on funding, acquisition, bibliographic control, and support of computer software. It is important to remember, however, that the distribution of software diskettes as we now use them may change considerably at the University as more file servers and site licensing becomes common in the next two or three years. Therefore any policy will require continuous revision and adaptation. Although a survey of campus units failed to locate any written policies which may serve as a model, a literature survey of articles and reports and some policies from other institutions were helpful in shaping this document. That Software Bibliography is appended as Attachment 1.

The draft software policy enclosed is our final report. Each Task Force member was responsible for a portion of the work. Early in our discussions we reached consensus that wherever possible, the treatment of software should be in accordance with our existing policies for handling other types of materials. Note that while we have not recommended any specific fund for the staff budget line, we have agreed that all software should be purchased through a single library acquisition point, namely the Acquisitions Department.

xc: Carla Stoffle

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[University of Michigan Library]

DRAFT STATEMENT

SOFTWARE POLICY

PURPOSE: The Library acquires software in order to support the educational and research needs of our students and faculty and to support Library services.

This policy reflects the philosophy that software is yet one other medium of materials which libraries handle, and that the guidelines for it should follow as many practices already in place as possible. While it is assumed that this policy will be generally followed, it is seen as the responsiblity of the various library units to develop more specific guidelines.

I. Software for publicly-available machines/users

Software purchase is made from materials budget funds and is included by fund managers in their annual request for funds.

There is precedence for software being purchased from the materials budget. For example, the purchase of blank audio/visual cassettes for the Sight and Sound Center and some working tools for staff are bought from the materials budget.

Software is selected by individuals now responsible for the book funds.

While a variety of committees or advisory groups such as the Collection Materials and Development Council, library committees, specially-designated software selectors, or a newly-appointed group might be used to approve software acquisition, it seems advisable to maintain the structure already in place for materials selection. This policy is intended to give the same responsiblity to selectors for software as is currently vested for the selection of other materials. However, it is important that criteria for software selection are written and agreed upon. A suggested draft is appended (Attachment 2: Software Selection Criteria). Furthermore, because software is a new medium with special selection considerations, a training program for software selection should be established as a staff development program during 1985/86.

Software is controlled bibliographically through records in Geac

A draft outline which can form the basis for input standards is attached (Attachment 3: Bibliographic Control of Computer Software for Public Use). MARC format and RLIN were judged less satisfactory because the L.C. subject headings are not terms which users would usually think of when trying to locate software, because software is somewhat ephemeral and unlikely to be useful for more than a few years, because RLIN record creation is costly and because individual library units will be able to quickly input records or cancel them as needed. Further, it is our understanding that other campus units may be interested in

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using Geac as a circulation/cataloging tool for software.

We recognize that some library units do not have Geac (although all have access through the Community Access module) and will therefore need to create local catalog records. Because the volume of software acquisition is expected to be quite low, this seems more expedient than using RLIN cataloging for these units. The Task Force recommends, however, that the software in these units also be entered in Geac just as the RLIN tapes are now read in so that a single source will list all software available to the public.

Circulation of software for the public is done at the discretion of the individual library units in compliance with Copyright provision

This policy follows the application of the general circulation code of the Library. A draft Copyright statement is appended to this document.

Software acquired for patron use is not supported by the Systems Office.

See Software Support (attachment 3) for background information on software support on campus. See also Section II on software software for staff use.

Gift software is evaluated according to the rules which obtain for other gift materials and the policies of the individual units.

II. Software for staff use

A budget line should be established for the acquisition of software for staff use. Requests to draw on these funds will be made to the Collection Materials and Development Council in the same manner as other materials funding requests are addressed.

The Task Force sees CMDC in the broad role of coordinating access of information sources which should include software. This review is similar to the established procedure for procuring in-house tools which requires the authorization of the Assistant Director for Collection Development.

In considering how to fix an initial budget for staff software acquisition the Task Force used a per machine formula, then discarded this idea as fixing too closely what the needs of the various units might be. However, for purposes of arriving at some supportable dollar amount, the 90 library-supported machines were multipled by $300, a number which assumes that most packages will cost about $100-150 and most machine-users may want 1-3 new packages during the course of the year. Therefore the Task Force would recommend that $25,000 be allocated for staff software purchases during 1985/86.

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Staff expecting to acquire software for internal use will prepare a worksheet which cites the software version and operating requirements for review of technical details by the Systems Office before software funds are sought and the software is ordered

The Systems Office check is seen as a way to prevent packages being ordered which will be incompatible with Library hardware configurations. A draft worksheet is attached (Attachment 4: Internal Software Acquisition Form).

Software acquired for staff use is supported to one of three levels:

Full support is given packages purchased Library-wide, or by a number of units or having Library-wide effect. The determination of effect is made by Library Administration and number being in the range of 25 copies. Only 2 packages of the same type (e.g., word processing, spreadsheet, etc.) can be supported.

Full support includes:
- selection research
- ordering/assistance
- installation
- training and training materials
- vendor relation
- call-in assistance
- integration assistance (with other packages)

Full support does not include:
- applications design

Partial support is available for packages which are less widely used and those which are purchased or acquired as "demo" packages.

Partial support includes:
- basic ordering/evaluation advice
- installation of software on the machine
- consultation on technical issues

Partial support does NOT include:
- training
- vendor relations
- call-in support
- integration assistance

No or limited support is available for those packages acquired uniquely or with extremely limited distribution.

Background information about software support is included in Attachment 5: Software Support.

A list of library-purchased software is available in a CONFER file.

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It is important that the experience gained by a unit with a particular package is accessible to others who might consider the package. Therefore, a conference which is tightly-formatted FOR INFORMATION ONLY is suggested. An example of a typical entry is appended (Attachment 6: CONFER Sample Format for Software Evaluation). It is assumed that further discussion of the information in these conference entries would take place OUTSIDE this CONFER file.

III. Common to both categories

All library-acquired software is acquired through the Acquisitions Department regardless of the source of funding.

In treating software as any other format of library materials and acquiring following standard routines, orders will be placed through Innovacq. Reports will be generated reflecting the activity by unit and a financial audit trail will be maintained just as with other purchases.

There are five potential ways to acuqire software. Currently no one way seems dominant.

1. Publisher: Usually we will need to acquire the materials directly from the publisher/producer.

2. Local software dealer: Some software and support may be available through local dealers such as Technology Partners.

3. Approval plans: These plans are supplying some software from standard publishers as part of their regular plan profile.

4. Bookdealers: As with the approval plan, booksdealers are supplying software that is available from the publishers they regularly vend.

5. Central Purchasing Department: the UM Purchasing Department is making special, low cost arrangements for large volume purchases of commonly-used programs. If we were to coordinate our ordering with them, we might in some instances be able to save money. Gene Ingram, Head, University Purchasing, expects that 15-20 packages will be secured for the University in this manner during the next few months. Those packages will be technically supported by the Micro Ed Center.

Software is held while it is effective and relevant to the needs of our patrons or staff. Software for public use which is out-of-date or damaged software is withdrawn or replaced at the discretion of the selector. Staff use software is sent to the UGL Microcomputer Center who will decide whether to retain or withdraw the programs.

It is expected that the Copyright Compliance Guidelines for Software will be observed by the Library.

Attachment 7: Draft Copyright Compliance Guidelines for Software.

IV. Broader roles

While the Task Force has not formulated any suggested policy in this area, it is important that we keep in mind the various other opportunities and roles which the Library may play. For example, in making our holdings available in Geac, we may want to consider taking a leadership role in developing a campus-wide database of software held in units which would be willing to demo or discuss packages which they hold. We may also want to consider making information about software (directories, reviews, evaluations, online files of specifications, vendors, etc.) more widely known. The Task Force has appended "Selected software sources: a listing and review of interest to librarians" for Library staff, Attachment 8. The Engineering Libraries have just completed a 30-page software bibliography for publication by the Engineering Libraries Division of the American Society of Engineering Education and by Serials Review. These two sources could serve as a basis for developing a broader reference file for the Campus.

(Phone interview with Linda Piele, University of Wisconsin-Parkside, located in Kenosha, WI: Area 414-553-2642, August 26, 1985. She chairs ACRL Microcomputer Services in Academic Libraries Discussion Group.)

Library collects software programs and CAI packages. She mentioned that Peterson's Directory is on disk.

The library is also a microcomputer center for the campus. Library and AV areas merged about ten years ago.

When they began collecting non-book formats (software, etc.) they looked at their collection development policy statement. This appeared to be broad enough to include these new kinds of materials without altering the document appreciably. She said she would send us a copy of their policy.

Software and CAI packages are available for library use only. Occasionally a faculty member may check out an item for a class demonstration. Software is housed behind the circulation desk, not on open shelves.

She mentioned that the U. of Wisconsin--Stout which has a well-known integrated book and media collection no longer integrates software with book collection. These materials are housed in a lab. The reason is that the materials were physically damaged.

Parkside also has had a bad experience with educational AV packages (e.g., a set of slides and an audio cassette). With audio cassette tapes particularly they discovered that in one year all cassettes were stolen, primarily because people wanted a blank tape for their personal use. Parkside sees a similar situation with respect to floppy disks. They have or will soon begin using an IBM detection system for materials.

Ms. Piele also discussed some public service aspects of their operation. Their micro collection began three years ago with 8 Apples and 20 hours of student help. Equipment was not paid for from library funds. They are presently using 90 hours of student help. They have had no full-time staff increase to handle supervision of their student help. All seven librarians participate in their instruction program as well as public service functions. One librarian is currently designated as a "Microcomputer Services Coordinator"; but all help with these functions. From what I learned, the staff were not given any special training on computers. Staff has become self-educated about computers. Ms. Piele indicated that many of the library staff had purchased pc's of their own, and worked at learning how to use them.

Ms. Piele said she would send a copy of their collection development policy, and any other items she came across that might be useful for our task force.

—Bernice Bergup

Note: Policy received 9/85.

INTERVIEW WITH BONITA BRYANT, HEAD OF COLLECTION DEVELOPMENT, SUNY-ALBANY
September 16, 1985

1. Our Task Force on Machine Readable Data Files read with interest in the ARL Spec Kit on Machine-Readable Data Files of the position that was being created in the library at SUNY-Albany to work with MRDF. Has that position been filled? If so, how's it working out?

The job had to be advertised 3 times, each time with less being asked for in the way of technical (i.e., computer-related) skills. The people with technical skills usually lacked an MLS. Finally, the 3rd time, a librarian who expressed interest in and willingness to learn about MRDF was hired. Unfortunately, she's done very little to date about MRDF--she's been working on the social sciences bibliographer aspect of her job, and filling in for one of the other staff members, who's been on sabbatical this past year.

Expect more MRDF-related work to be done next year. Next year, this person will work on preparing a directory of available databases [think she also means data files] on campus; will also draw up a budget recommendation for collecting MRDF and a collection development policy as well.

2. What kind of MRDF are you collecting/do you plan to collect?

The library is responsible for ICSPR membership; not "collecting" tapes, though. Have bought a few Roper tapes, but not a member of the Roper Center.

3. Does the library keep codebooks for the computer tapes that are available on campus?

Yes. The library keeps them because the Computer Center's not interested in keeping them. Presently, they're not cataloged; just organized by number. Hope to catalog them, probably set up an office for the MRDF person, which is where the codebooks will be housed. Shouldn't be kept "floating" in stacks.

Ms. Bryant expressed interest in seeing our collection development policy for MRDF, as well as the TF's report.

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Interview with ORI Information Systems Division Re. ERIC on SilverPlatter
August 16, 1985

1. How will coverage in the ERIC SilverPlatter database on compact disck compare to that of the online ERIC database?

Coverage will be the same. The SilverPlatter database will include 2 archival discs, covering 1966-1980, with separate discs for Resources in Education and Current Index to Journals in Education. (These files are normally combined, but can also be searched separately on the online ERIC database). A third disc will contain 1980 to the present, and will be updated quarterly.

2. How much do you think the annual subscription will be?

Right now, it's estimated that the annual subscription will cost between $4,000 and $5,000. This will include rental of a modified IBM/PC (modified for compact disc).

3. Is a printer included with the hardware?

No, but the SilverPlatter people are considering offering the printer as another option.

4. Since other databases--Psychological Abstracts, Library and Information Science Abstracts, and Public Affairs Information Service--will also be available through SilverPlatter, and since a single, modified PC could be used for searching all of the above databases, it should be possible to circumvent a subscription fee which includes the rental of an IBM/PC for each of the databases. Do you know anything about this?

Not much. Believes SilverPlatter is working on a pricing policy for multiple database subscribers.

5. When do you think the ERIC SilverPlatter database will be available to the public?

Probably in May or June, 1986. The schedule is as follows:

Alpha testing	Nov.-Jan.
Data phase	Feb.-Apr.
DB avail. to public	May or June

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5. Are you interested in volunteers, such as UNC-CH, to test out your system?

Have ~~Has~~ gotten several such offers. However, preliminary testing [evidently, this is the alpha phase] will be done at three locations--ERIC headquarters, the National Institute of Education, and the San Mateo Educational Research Center, which does more ERIC searches than any other organization in the country.

7. How do major database vendors such as Dialog and BRS view SilverPlatter databases?

Neither they nor SilverPlatter view the compact disc databases as a replacement for online databases. Think of them instead as an option for people normally lacking access to traditional online database vendors.

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ERIC

The Educational Resources Information Center (ERIC) database is the national U.S. bibliographic database covering the literature of education. It is one of the most widely searched databases in the world. It is comprised of two separate files: (1) Resources in Education *(RIE), handling the document and report "fugitive" literature, and (2)* Current Index to Journals in Education *(CIJE), handling the published journal article literature (as contained in over 775 major education-related serials/periodicals).*

ERIC on compact disc

ERIC, available to the public for years on magnetic tape and on-line, will soon be available in an exciting new high-tech format—compact digital disc (commonly known as the CD-ROM disc).

The entire ERIC database will be provided on SilverPlatter™ compact laser discs, together with the hardware required to use the disc, the indexes providing access to the ERIC records, and powerful and flexible search software. For the first time, the ERIC database will be available in a totally self-contained, fixed-cost system for local use without connect or communication costs and under your direct control. In keeping with ERIC's long tradition of promoting low-cost dissemination of its information, this system has been especially designed to provide unlimited and economical searching for the entire educational community—policymakers, administrators, teachers, counselors, researchers, and students.

The ERIC database will be available on one or more archival discs that do not require updating (e.g., 1966–1975 and 1976–1985). Current year data will be contained on a separate disc that will be updated and issued on a quarterly basis. Each disc will be totally independent, containing the records, indexes, and software necessary for full use. The RIE and CIJE files will each be on separate discs.

Searching ERIC on compact disc

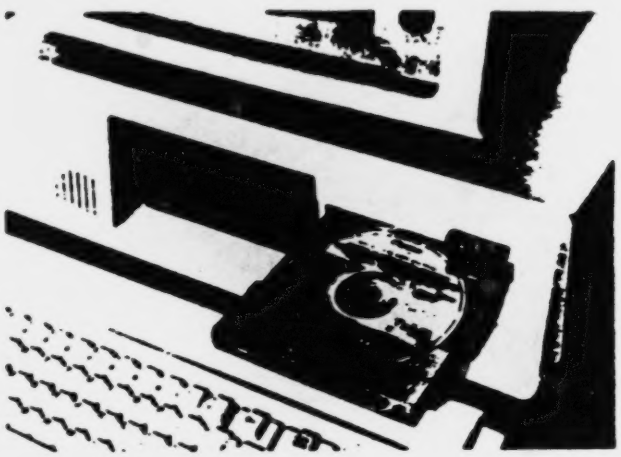
The *Resources in Education* (RIE) printed abstract journal contains indexes by subject, author, institution, and publication type. The *Current Index to Journals in Education* (CIJE) printed index journal contains indexes by subject and author.

Using the powerful and flexible search software incorporated into the ERIC database on SilverPlatter™ compact disc, you will be able to perform all of the search tasks available through the printed reference tools and most of the search tasks now possible on the major on-line systems such as DIALOG, BRS, and SDC. For example:

- **Search** both subject matter fields (descriptors, identifiers, words in title, words in abstract) and non-subject matter fields (author names, institution names, publication type, language, geographic source, target audience, etc.).
- **Browse** the dictionary of available index terms.
- **Specify** output requirements using Boolean operators AND, OR, and NOT.
- **Interact** with the system to adjust your requirements based on initial outputs at your workstation.

More specifically the following features have been built into the SilverPlatter™ search program:

- **Full Boolean capability**—AND, OR, NOT.
- **Search** for controlled index terms or words/phrases in full text, or both at once.
- **Truncation capability,** allowing you to search all words having a common base prefix.



- **Proximity Searching,** permitting you to specify that certain words must be adjacent or near one another in the field searched.
- **Select and Display options,** allowing users to select from the output and print the selected items in the desired format.
- **Context-sensitive help information,** contained on each disc to permit even first-time users to effectively conduct their own searches.

Subscribing to ERIC on SilverPlatter™ compact disc

- Everything you need is provided with a single subscription workstation* (including keyboard, display monitor, compact disc reader, and microcomputer), compact discs (containing database, indexes, and search software), telephone Hot-line support.
- Your costs are fixed and fully identified up front. The ERIC database on SilverPlatter™ compact disc provides unlimited access within your predefined budget.
- A number of different SilverPlatter™ database subscriptions can be supported on the same single workstation.*

For further information

If you are interested in the ERIC database on SilverPlatter™ compact discs and would like to be kept informed of the availability and subscription costs as the product is introduced (early to mid-1986), please write or call the following address:

ERIC Database on SilverPlatter™ Compact Disc
c/o ORI, Inc., Information Systems Division
4833 Rugby Ave., Suite 301
Bethesda, Maryland 20814
(301) 656-9723

*Workstation is loaned to the subscriber with a nominal monthly charge for equipment maintenance.

SilverPlatter is a trademark and service mark of [illegible]

Interview with American Psychological Association Re.
PsycLit on Compact Disc
September 1985

1. How will coverage in the PsycLit SilverPlatter database on compact disc compare to that of the online Psychological Abstracts database?

   Coverage will not be as broad. Psyclit will go back only to 1974 (the online file goes back to 1967), and will exclude dissertations, technical reports, and monographs.

2. Don't you see the more limited scope of PsycLit as a disadvantage? For example, what about graduate students who are working on dissertations and need to do a comprehensive literature search?

   Such students will have to continue to search online or do manual searches. Psyclit is not really aimed at libraries as much as it is academic departments; thinks more likely that the Psychology Dept. might subscribe to it than the library. Would be used by faculty and students to search authors, subjects.

3. How much do you think an annual subscription will be?

   $4,000-$5,000 when it's first offered.

4. What, in the way of hardware, does this include?

   Doesn't include any hardware. Hardware might be available from SilverPlatter for, possibly, another $100 per month, which would include maintenance and support.

   At first, SilverPlatter was going to require that every subscriber also lease hardware from them. They seem to be changing on this. [Note: this is the first time I've heard this--people from ERIC and PAIS did not mention this.]

5. When do you think PsycLit will be available?

   Probably around July of '86. Will be tested at data sites in April of '86.

6. How do major database vendors such as Dialog and BRS view SilverPlatter's compact disc databases?

   Not really sure; don't know if they're planning to enter the market or not.

7. Do you have any other comments about PsycLit?

Aware that initial subscription price will limit subscribers; feels that, with time, price will come down, although not sure how far down.

ds

PsycLIT

Psychological Abstracts soon to be available in a new medium. Your library's major resource for information in psychology and the behavioral sciences, cumulated since 1974, mastered on a SilverPlatter™ compact digital disc, and presented to your users—PsycLIT.

A trusted reference source and a powerful new technology

PsycLIT is a new information database from the PsycINFO Department of the American Psychological Association, covering over 1300 journals and monographic series from approximately 45 countries and in more than two dozen languages. the PsycLIT Database provides summaries of the international literature in psychology and related fields compiled from PA. Students, psychologists, educators, consultants and practitioners will find in PsycLIT a familiar resource of information for developing curriculum materials; researching a book, manuscript or thesis; providing expert testimony, and more.

The unique capabilities of the computer and the storage capacity of the compact digital disc (CD-ROM) combine to greatly enhance information retrieval. Databases previously available for searching only through large, remote computers are now brought into the library, classroom, or office for convenient, individual access.

A dynamic search and retrieval system

The powerful search and retrieval system incorporated into the PsycLIT Database on SilverPlatter™ compact disc permits the user to locate the precise information needed. Complete and context-sensitive HELP screens allow even first-time users to effectively conduct searches

- **Search** quickly and efficiently using free-text or field qualifiers.
- **Browse** the dictionary of index terms in the GLOSSARY.
- **Combine** concepts with Boolean operators.
- **Limit** retrieval according to selected parameters.
- **Display** search results.

Features of PsycLIT on SilverPlatter™ compact disc:

A subscription to PsycLIT on SilverPlatter compact disc offers the library:

- A complete package

  Microcomputer workstation consisting of
  • Keyboard • Display Monitor
  • Laser Disc Reader.

  PsycLIT Database on CD-ROM with quarterly updates.

  Search software including HELP screens.

  Telephone Hotline Support for • Hardware • Software • PsycLIT database.

- A single, fixed price subscription
- Unlimited, interactive searches without on-line per-hour connect or telecommunication costs.
- No hardware or software to evaluate or purchase

For further information on PsycLIT and other services of the PsycINFO Department of the American Psychological Association, call or write:

Psychological Abstracts Information Services
1400 North Uhle Street, Arlington, VA 22201
(800) 336-4980, In Virginia: (703) 247-7829

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American Psychological Association

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Interview with PAIS Re. PAIS International on Compact Disc
August 19, 1985

1. How will coverage in the PAIS SilverPlatter database on compact disc compare to that of the online PAIS database?

   The current intention is to have it duplicate the online database, but since PAIS is nowhere near actual production of its files on compact disc this is somewhat speculative. Barabara Pershell, Executive Director,PAIS, said that they are not rushing into this.

2. How much do you think a subscription will be?

   Too soon to say; hesitates to say. Price for printed indexes is relatively low; Compact disc would be higher. Perhaps in the $1,000-$3,000 range. Pershell stressed that PAIS is not tied to SilverPlatter; there are at least 20 different groups that she knows of who plan to sell/rent compact discs to libraries. A year from now, many will no longer be in business--I got a strong "wait and see" attitude from her.

3. What about the hardware?

   With SilverPlatter, Pershell said that high subscription rates are not for rental of the hardware, which is what the ERIC person I talked to said, but for monthly maintenance/service charges and the actual compact disc database.
   With any compact disc, Pershell said that it would be important not to buy a dedicated terminal or hardware.

4. Since other databases--PAIS, LISA, and ERIC--will also be available through SilverPlatter, and since a single, modified PC could be used to search all of the databases on compact disc, it should be possible to circumvent a subscription fee which includes hardware costs for each of the SilverPlatter databases. Do you know anything about this?

   No.

5. When do you think PAIS will be available?

   Perhaps sometime next year.

6. How do major database vendors such as DIALOG and BRS view SilverPlatter's compact disc databases?

   Dialog has been conspicuously silent. BRS, which

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had a meeting for its database producers, has stressed that it is not a vendor in a typical sense (i.e., lt'd. to online databases). Sees itself as an organization which provides packaged information; open to new formats, suggestions. Will attempt to be like an information supermarket.

7. Other

Pershell said that one thing that she and some of the other database producers had been talking about was issuing compact discs which consisted of sections of several databases dealing with a large subject area. For example, she talked about a compact disc called "The Trial" which might feature all publications indexed in PAIS, Soc. Abstracts, and Psych. Abstracts dealing with judges, juries, decisionmaking, rehabilitation, probation, etc. She wanted to know how I felt about that, and I told her that for a large research library, that would be too specialized; our preference would be for full databases rather than narrower subject areas. She said they were also thinking of issuing database subsets like "The Trial" on floppy disks.

Person interviewed: Barbara Pershell, Executive Director
ds
8-19

PAIS INTERNATIONAL

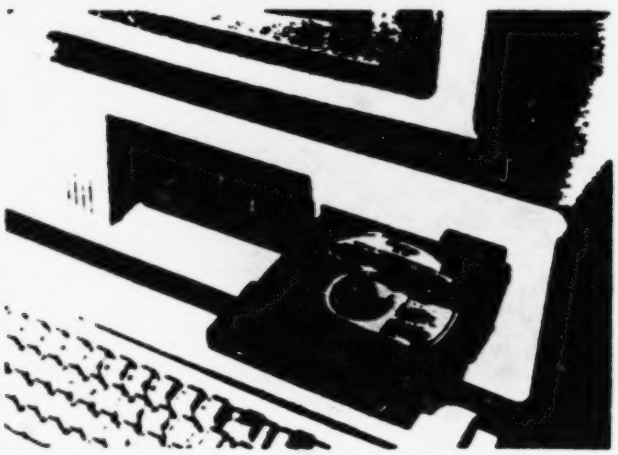
PAIS International, the primary reference database for the public policy aspects of the social sciences, business, law and economics, may soon be available in a convenient new format—compact digital disc—incorporating information from the widely used PAIS Bulletin and PAIS Foreign Language Index with additional descriptors and abstract-like notes.

PAIS International on compact disc

PAIS International is a wide-ranging and well-edited database providing substantive coverage in the areas of • Business • International Relations • Public Administration • Law and Legislation • Banking and Finance • Political Science • Government • Sociology • Statistics and more. The professional, in-depth indexing of the PAIS International database is of great value to those involved in the making and evaluation of public policy, including librarians, business and government practitioners, scholars, students and other information seekers.

More than 225,000 indexed items are supplemented by an additional 24,000 references each year. These are selected from more than 1200 leading journals plus 9,000 monographs including books, pamphlets, directories and government publications. International coverage includes references in English, French, German, Spanish, Italian and Portuguese.

Users who have benefited from the fast, easy access associated with the on-line version of PAIS International will find the SilverPlatter™ compact disc version easy to use since many of the same features and a number of new ones are incorporated. Economical on-site use of the SilverPlatter compact disc will allow a significantly larger group of users to access the PAIS International database.



Here's how it works

- **Search** quickly and efficiently using free-text or field qualifiers.
- **Browse** the dictionary of index terms in the Glossary.
- **Combine** concepts with Boolean operators.
- **Limit** retrieval according to selected parameters.
- **Display** search results.

Advantages of a PAIS subscription on SilverPlatter™ compact digital disc

- There's no equipment to purchase or hardware/software to evaluate.
- Everything you need—PAIS database on SilverPlatter™ compact discs and updates, together with a workstation including keyboard, display monitor, compact laser disc reader and search software, plus telephone HOTLINE support—is provided as part of your subscription to PAIS on the SilverPlatter compact disc.
- Complete and context-sensitive HELP information is contained on the disc to allow even first-time users to effectively conduct their own searches.
- Fixed costs and controllable budgets are possible with the PAIS International compact disc subscription, providing unlimited, interactive searches without on-line connect and telephone charges.
- The more you search, the less it costs per search.

In addition, you can support a number of different SilverPlatter™ database subscriptions on the same workstation.

For complete information on the PAIS Compact Disc Database call:

Public Affairs Information Service, Inc.
11 West 40th Street
New York City, New York 10018-2693
(212) 736-6629

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Interview with SilverPlatter, Producer of CD-ROM Databases
September 20, 1985

[Note: SilverPlatter, a division of the IMLAC Corporation, is the producer of CD-ROM versions of 5 heavily used databases: ERIC (Educational Resources Information Clearinghouse), Index Medicus, PAIS (Public Affairs Information Service), PsycLit (version of Psychological Abstracts), and LISA (Library and Information Science Abstracts). All are expected to be available to the public in 1986.

1. I've talked with people at ERIC, PAIS, and the American Psychological Association, and each of them has given me a different version of what's included with a SilverPlatter database subscription. ERIC told me that the hardware supplied by SilverPlatter for use with the CD-ROM database(s) became the subscriber's property, and that part of the subscription cost was for maintenance of the hardware; PAIS told me that the subscription included rental of the hardware, and the PsycLit people told me that the subscription didn't include either the acquistion or the rental of the hardware. Which is right?

   These different answers reflect changes in SilverPlatter's marketing plan and different options that may be available to subscribers.
   SilverPlatter's initial marketing plan, discussed at ALA, was that SilverPlatter would supply PC's to its subscribers, and the original projections for subscriptions included this cost. People, however, balked at the idea of a PC dedicated to use with the SilverPlatter databases. As a result, the marketing plan has been modified to include many possibilities.

2. What are these possibilities?

   Now expect subscribers to supply their own PC's. They can buy or lease CD-ROM drives from SilverPlatter or they can purchase them from their usual hardware supplier. Hardware and maintenance will be completely separate.

3. How much do you estimate a CD-ROM disk drive will cost?

   Not sure. Have been working with all 3 manufacturers of CD-ROM drives (Hitachi, Sony, and Philips), but hesitate to say. Will probably be available, though, in the next 3-4 months.

4. What do you estimate the range of annual subscriptions

to these databases will be?

Expect them to fall into the $3,000-$5,000 per year range (per database). For each database, subscription will reflect a)am't. of data (including retrospective files); b)frequency of updates; and c)number of subscribers.

5. What has been the reaction of librarians to the proposed subscriptions?

Based on conversations at ALA, the reaction seemed to correlate with the size of the library's budget for online searching. Suspect that it will be a year or two before libraries with smaller budgets become involved.

6. Many libraries do not subsidize direct costs incurred in online searching. Subscription to a database on SilverPlatter would, in effect, subsidize all searching of certain databases. At UNC, online searching and subscriptions come out of two different budget lines. How would you recommend handling this?

Would have to define differently. For one thing, can define a service--e.g., online searching of the ERIC database--and know in advance exactly how much it is going to cost the library.

7. What's your schedule for the availability of these databases.

ERIC and PsycLit will be the databases that are available first. At present, the schedule for them is as follows:

Dec. '85	Preliminary testing at SilverPlatter headquarters
Jan. '86	Alpha testing at ca. 6 libraries/locations
Mar-Apr. '86	Beta testing at 50-60 libraries

8. How are you selecting the beta test sites?

Libraries that subscribe first will become beta test sites.

9. How do the major database vendors such as DIALOG and BRS view your entry into the marketplace? Do you expect them to make CD-ROM databases available as well?

Don't know what they're doing. BRS, however, made available several new PsycInfo brochures and information materials at the last American Psychological Association meeting, possibly in response to the forthcoming CD-ROM databases.

10. I'm curious about your reasons for excluding dissertations and certain other categories of materials from the PsycLit database, since doing so somewhat limits the database's usefulness to certain researchers--graduate students doing literature searches for their dissertations, and so on. Can you tell me why you decided to do this?

The database producer, the American Psychological Association, defined the contents of PsycLit; can't really say why certain categories of materials are excluded. It's possible, though, that if there's a strong reaction among subscribers to the exclusion of dissertations, that APA will reconsider.

11. How will mailing of updates be handled? Will disks pass in the mail?

Yes. When the library receives an update, it will be asked to return the superseded disk back to SilverPlatter. SilverPlatter will not send the next update until it's received this superseded disk.

12. Are you at all concerned about copyright and/or licensing violations by subscribers?

Somewhat concerned. At first, when planning to supply all hardware to subscribers, planned to require use of a particular sequence of CD-ROM disk drives. Probably won't do that now. Think it's unlikely that a library will violate the licensing agreements it enters into with the database producers; that library will lie about losing disks and make them "bootleg" copies.

13. Are you working on (or do you have any plans for) any other library applications of CD-ROM technology? For example, do you plan to put out an equivalent of Grolier's American Academic Encyclopedia on compact disk?

No. For libraries, focusing on the 5 databases mentioned above. Will, however, be working on an

information retreival package for use by large corporations to store and access inhouse databases.

14. This is an exciting development for libraries, because it makes it possible to provide library users with a whole new way of searching databases. Do you know if any of the libraries that plan to subscribe are going to try and get grant money?

Yes, some are. Plan to get grant money for help with either hardware or software. Also, thinks National Library of Medicine may have some grant money available for user education, and that this money may not be limited to libraries using the Medline database.

Person interviewed: Jane Niemi
DS, 9-20-85

Appendix 4
UNC-CH Academic Affairs Library

Collection Development Policy for Machine Readable Data Files On Disks

June 26, 1985
revised July 1, July 3, September 24, 1985

Introduction:

The fact that access to computer technology is now widespread within society as a whole has led to a corresponding increase in information resources which are available in new formats such as microcomputer floppy disks (also referred to as "diskettes") and magnetic tapes. While these new formats differ significantly from those conventionally collected by libraries, the information that is carried or conveyed through this new medium, whether bibliographic, numeric or textual, constitutes a logical extension of those materials which libraries currently collect. As one example of the types of information now available in the new format, in the past the Chronicle of Higher Education developed various yearly surveys and statistical analyses which were published regularly in hardcopy in issues of the Chronicle. These tables and surveys are now available for purchase on floppy disks, which allows the individual user to manipulate and reformat the data in whatever manner and for whatever purpose the user may choose. Other types of information, especially statistical information, census data, etc. which previously appeared in book or serial format, have likewise become available on disks or magnetic tape. The U.S. Bureau of the Census publications, The County and City Databook, County Business Patterns, and Population Estimates are examples of titles formerly in hardcopy which are also now available as data diskettes. Examples of non-numeric data files are: CareerScan IV, Directory of Public High Technology Corporations and the Academic American Encyclopedia. Examples of instructional data files are: Ethical Problem-Solving in the Social Sciences and Harmonic Analysis and Dictation. Increasingly, other information of an instructional, reference and research nature are also becoming available on magnetic and optical disks and in other machine readable formats.

While policies on the selection and acquisition of books, serials, videotapes, audio tapes, films, and filmstrips currently exist, few policies have been developed to adequately handle the selection and acquisition of data diskettes and datatapes. The following document is intended to provide such a policy for magnetic and optical disks only. Both fixed and manipulatable types of data files in these categories are covered by this policy. Because of the special requirements which apply to magnetic tapes, including their often being accessible only through mainframe computers, magnetic tapes are excluded from this policy. It should be noted that, due to the rapid and unpredictable technological advances which are taking place in terms of computer applications, this policy for data diskettes will necessarily require frequent review and revision.

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1. General Considerations

A. The BASIC PREMISE in establishing a formal policy on the selection and acquisition of materials in a machine readable format is that an academic, research library has as its primary responsibility the provision of access to the most extensive and most sophisticated sources of information available within the limits placed on the library by its financial, personnel and physical resources. Materials, such as data diskettes, which provide access to and enhance the use of significant information resources are appropriate additions to the library's selection and acquisition programs. They add a new dimension to the information which a library can provide and therefore, subject to financial and physical contraints, belong in the library's collections.

B. Because of the existence of a multitude of materials which appear in machine readable formats some means of differentiating among these formats for the purpose of selection and acquisition is necessary. Any DEFINITION of materials to be covered by this policy must take into account the existence of two basic types of disks (diskettes): 1) Program diskettes; and, 2) Data diskettes. Program diskettes contain "a logically arranged set of programming statements (or instructions) defining the operations to be performed by a computer in order to achieve the desired results." Examples of program diskettes are: Lotus 1,2,3, dBase III, Multimate, VisiCalc, SuperCalc, R-Base, etc. Data diskettes contain "characters grouped together in specific patterns, to which meaning is assigned: commonly used to designate the numbers, facts, concepts, or the like to be processed by a program." Examples of data diskettes are to be seen in the aforementioned U.S. Bureau of the Census publications, The County and City Databook, County Business Patterns, Population Estimates, CareerScan IV, PsycLit, Ethical Problem-Solving, etc.

C. Included within the SCOPE of this policy are only issues related to the selection and acquisition of data disks. Issues dealing with the selection and acquisition of individual program disks are excluded from consideration in the present policy, except in those instances where the individual publisher or supplier has included them as an integral and inseparable part of the data disk. (At present the selection and acquisition of program disks is expected to take place outside of the library materials budget. The fact that program disks are presently excluded from this policy is not meant to preclude their possible inclusion, contingent upon circumstances, at some later date.) Further, data disks must be located in those areas within the Academic Affairs Library which have the ability to handle and service these materials. DATA DISKS OF ANY SORT CANNOT BE HOUSED IN OPEN STACKS IN ANY ACADEMIC AFFAIRS LIBRARY UNIT.

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2. Selection Procedures

The same selection CRITERIA which are currently applied to the selection of books, serials and standing orders should be applied to the selection of data disks: 1) The materials enhance the library's collections; 2) The material is of a high quality both physically and intellectually; 3) The materials are within the subject parameters of the collections; and, 4) The materials are appropriate to the teaching and research needs of the community which the library serves; and, 5) In light of items 1-4 above, the cost of the material must be weighed against the cost of other possible purchases. Finally, in the case of selection by academic departments, it must be emphasized that data disks selected must be cataloged and housed within a unit or Department of the Academic Affairs Library. (They cannot under any circumstances be indiscriminately housed in the library's main stacks.)

As is the case with books, serials and standing orders, academic departments cannot use library materials funding to select materials to be held outside of the library system. In addition to these preexisting criteria for selection, several other factors must be considered in the selection process:

A. The data disks must be available for acquisition by the library. Agencies which sell or provide only to individuals rather than to institutions should be excluded from the selection process. Under no conditions will blank disks be provided in barter by the library as a basis for any agency providing or producing data disks.

NOTE: If an individual who has acquired or been given materials wishes in turn to donate these materials to the library with the understanding that these materials will be available generally, the materials should then be treated as would any other unsolicited gift.

B. All hardware, i.e. "the physical equipment and components in a computer system," required to operate the data disk must already be available either in the Department selecting the material or in the area which will ultimately house the data disk.

NOTE: If materials are being selected by a Departmental Library and are to be housed and used in that Departmental Library, then the Departmental Library must already possess the hardware necessary to run the data disks. Materials selected by an external unit for possible housing in a Departmental Library or any Academic Affairs Library unit must first gain permission and approval of that unit before selection. The library or unit concerned will determine whether it is interested in having the material, and then if it has the capability for housing and servicing the material requested.

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C. All programs required to operate the data disk -- except those which are an integral part of the material under consideration for selection -- must already be available either in the Department selecting the material or in the area which will ultimately house the data disk. Program disks which are not available to the public, e.g., those used for internal departmental record-keeping or other non-public operations, do not meet this requirement.

NOTE: If materials are being selected by a Departmental Library and are to be housed and used in that Departmental Library, then the Departmental Library must already possess the programs necessary to run the data disks. Materials selected by an external unit for possible housing in a Departmental Library or any Academic Affairs Library Unit must first gain permission and approval of that unit before selection. The library or unit involved will determine whether it has the program capability of housing and servicing the selection.

D. Part of the selection process must also include the prior determination, i.e., before ordering, that sufficient personnel with an adequate level of training in hardware and software use are available in order to assure access to and proper use of the materials selected.

NOTE: If materials are being selected by a Departmental Library and are to be housed and used in that Departmental Library, then the Departmental Library must already possess the personnel necessary to run the data disks. Materials selected by an external unit for possible housing in a Departmental Library or any Academic Affairs Library unit must first gain permission and approval of that unit before selection. The library or unit involved will determine whether it has the personnel capable of servicing the materials selected.

3. Funding

Funding for those materials which meet all the selection criteria above will be the same as currently exists for books and new subscriptions. One time purchases of data disks will be considered as being the same as an expenditure on books. Subscriptions to services which provide data disks on a recurring basis will be considered as being the same as a New Subscription. There will be no special allocation for the purchase of these materials, and they must fall within the financial limits provided by the existing budget allocations. The same limitations which currently exist for Book and New Subscription expenditures will also apply:

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A. Individual data disks being requested for purchase within a Book Allocation and costing over $250 but less than $500 must be approved by the University Bibliographer before they are forwarded to the Acquisitions Department.

B. Individual data disks being requested for purchase within a Book Allocation line and costing more than $500 must be approved by the Research Fund Committee of the Library Administrative Board before they are forwarded to the Acquisitions Department.

C. More expensive data disks can be considered by the Research Fund Committee at both its fall and spring meetings. These requests must meet the same criteria and standards which apply to all materials to be considered by the Research Fund Committee.

D. Requests for additional funding in the Book and New Subscriptions lines for the specific purchase of data disks should be included with the budget requests which are submitted in May/June of each year. Although the amount should be included as part of the Book or New Subscription allocation request, as is appropriate for the type of material, the amount requested for data disks should be specifically and separately stated.

E. Expenditures for data disks will be monitored by the Collection Development Department on a regular basis in order to determine the increase or decline in interest in the acquisition of these types of materials; their impact on existing collections and services, will also be studied.

4. Acquisitions

As is currently the case with Books and New Subscriptions, the appropriate order card should be generated by the unit ordering the material. Information on the order card should include the specific title of the data disk and all information appropriate to identify the agency selling the material. It should be clearly indicated on the order card that the material is a data disk. The Academic Affairs Library location for the data disk must be indicated. If the location for the material is other than that of the individual approving the order, then the order card must also contain the signature of the individual who is in charge of that location. No materials will be accepted or processed for acquisition unless there is a clear indication that the location of the material has been approved.

5. Cataloging, Circulation, Copying and Use of Data Disks

Policies concerning cataloging, availability for use by the public, circulation and copying in addition to policies regarding public access to all the programs, hardware and data disks covered directly or indirectly by this policy are presently being developed. Upon approval these policies will be appended to this document.

LIBRARY COPY T238

6. Special Considerations

It is a stated and basic principle within this policy that no data disks should be stored in the open stacks of any Academic Affairs Library unit. Also included within this category of exclusions are <u>any</u> floppy disks (diskettes), magnetic tapes or other machine readable materials contained physically within books or serials. The main stacks provide neither access nor security for any of these materials. Those disks, especially ones contained in books, which are inadvertently checked out through the circulation system suffer the immediate and complete physical loss of the information stored on them. Dust, dirt, heat, humidity, compression, and improper storage and handling will also result in disk failure. A controlled environment is absolutely necessary in order to provide even minimal disk preservation. A location other than the main stacks <u>must</u> be established and approved before these materials are cataloged. Any materials which are not accepted at locations other than the main stacks must be either returned to the vendor or publisher, or discarded.

Because of the difficulty which the Library of Congress has had, until recently, in establishing cataloging procedures for data disks, tapes, program tapes, etc., especially those which are enclosed in books, we have acquired a number of unexpected data disks and programs which were included in books. These should be returned to the individual who ordered the material so that he or she may establish their specific library location in light of the above policy. In the future any such material identifed after receipt should be shown to the individual who ordered the material so that proper disposition of the material can be arranged in accord with this policy.

As noted previously in the policy, blank disks will not be provided nor can be acquired through the use of Library materials funding for exchange with an agency or publisher for data disks.

Appendix 5

ESTIMATE OF COSTS FOR CURRENTLY AVAILABLE SOFTWARE FOR AN MRDF UNIT

1.	CareerScan IV.	169.00	program
		15.00	backup disk
		184.00	
		84.50	annual update--SUBSCRIPTION
2.	Chronicle Data Service ca. 20 disks	3,000.00	apppoximate, for entire set
	Requires use of program, Data Analyst.	295.00	
3.	College Scan IV.	195.00	program
		20.00	backup
		215.00	
4.	County and City Data Book, 1983 (33 disks)	444.00	entire package
5.	County Business Patterns	550.00	" "
6.	Economic Outlook.	300.00	SUBSCRIPTION
	Requires use of either VisiCalc, Multiplan, or Lotus 1-2-3		
7.	Fiancial Aid Scan IV.	89.00	program
		10.00	backup disk
		99.00	
		44.50	annual update--SUBSCRIPTION

TOTAL COST OF NONSUBSCRIPTION ITEMS ABOVE = $4,492.00

TOTAL COST OF SUBSCRIPTION ITEMS ABOVE = $429.00

APPROXIMATE TOTAL COST OF NECESSARY PROGRAM SOFTWARE FOR RUNNING DATA DISKS (Data Analyst Program = $295; Lotus 1-2-3 = ca. $400) = $695.00

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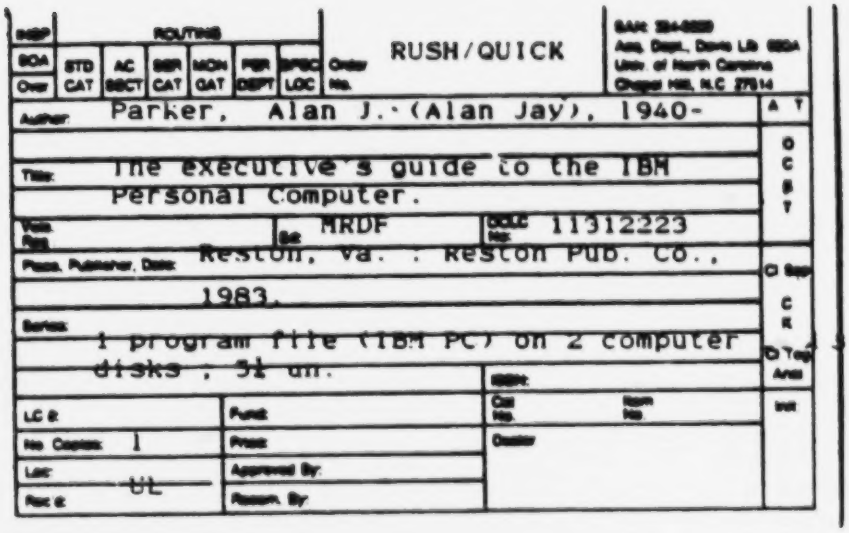
Appendix 6

ACQUISITION OF MRDFs

Part I
SAMPLE ORDER CARD



ROUTING

RUSH/QUICK

BOA Over | STD CAT | AC SECT | SER CAT | MON CAT | PER DEPT | SPEC LOC | Order No.

SAM: 364-0000
Acq. Dept., Davis Lib. 020A
Univ. of North Carolina
Chapel Hill, N.C. 27514

Author: Parker, Alan J. (Alan Jay), 1940-

Title: The executive's guide to the IBM Personal Computer.

Vols. Pgs. | Ed. MRDF | OCLC No. 11312223

Place, Publisher, Date: Reston, Va. : Reston Pub. Co., 1983.

Series:

1 program file (IBM PC) on 2 computer disks ; 5¼ in.

ISBN:

LC #: | Fund: | Cat No. | Item No.

No. Copies: 1 | Price: | Dealer

Loc: | Approved By:

Rec'd: UL | Recom. By:

A T | O C S T | C K | O Tag Area | Init

Appendix 6
Part II

PROCEDURES FOR ACQUIRING, PROCESSING, AND CATALOGING MRDFs

1. Selecting unit should:
   a) Add "Rush/Quick" to order card. [Will ensure that order is sent direct, and that a follow-up is made if it's necessary to claim materials.
   b) Should stamp "MRDF" on front of each order card to facilitate identification.

2. A specific individual in the Acquisitions Department Searching Section should search all MRDF orders.

3. Upon the arrival of an MRDF order, it should go directly to a designated individual in the Acquisitions Department, who will process and inspect the order, using the order pack and invoices and accompanying paperwork to verify that all the material has been received. Shrink-wrap, however should not be removed at this time.

4. The machine-readable data is then sent to the MRDF unit specified on the order card.

5. Upon receipt of the machine-readable data, the MRDF unit determines that all materials ordered have been received and are not defective.

6. MRDF unit notifies Acquisitions that:
   a. Order is correct and complete;
   b. Order is incorrect or defective and should be returned.

7. MRDF unit will at time of receipt of machine-readable data:
   a. Make backup copy if necessary.
   b. House at location backup copy.

8. Cataloger then goes to site to read documentation and examine the disk(s) on the microcomputer.

9. Cataloger will catalog fully all machine-readable data, but will not classify.

10. Cataloging is done and records are input into the OCLC system using machine-readable data format.

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Appendix 7

Cataloging Procedures for Machine-Readable Data Files

1. Call number.

   In the Academic Affairs Library, audio-visual materials are assigned accession numbers instead of Library of Congress classification numbers. Location of audio-visual materials is designated in the call number as a prefix to an accession number. (E.g., the Undergraduate Library's numeric designation is "65.") Machine-readable data files will be assigned assession numbers in basically the same manner as other non-print materials.

   MRDF
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2. Author field.

3. Title field. — Authorship is determined by using AACR2, rules 21.1A and 21.1B.

4. General material designation. — Add in brackets following title proper. The gmd [machine-readable data file].

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5.	Edition area.	When a statement of change in contents of a program, generally accept as an edition.
6.	Imprint.	Place of publication, distribution, etc.; name of the publisher, distributor; date of publication.
7.	File description area.	Records the extend of the file by means of a phrase which states the number of data files and/or program files, followed by the word "on" or "in" and a statement of the number and kind of physical medium on or in which the files are recorded.
8.	Accompanying material.	Any accompanying material which is recorded as part of the description of the item.
9.	Series area.	Series statement.
10.	Notes area.	Supplies bibliographic information not present elsewhere (ex. system requirements).

11. Subject headings. Library of Congress subject headings.

MRDF
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Parker, Alan J. (Alan Jay), 1940-
The executive' guide to the IBM Personal computer (machine-readable data file) : exercises and problems / Alan J. Parker. Reston, Va. : Reston Pub. Co.,:1983.
1 program file (IBM PC) on 2 computer disks ; 5¼ in.

Disk characteristics: single side.
System requirements: IBM PC; 64K; PC-DOS; two disk drives; printer.

1. Basic (computer program language) 2. VisiCalc (computer program) 3. Business - Data processing. I. 7 plam Parker, Alan J. (Alan Jay), 1940- The executive's guide to the IBM personal computer.

Appendix 8

SURVEY OF POSSIBLE LOCATIONS FOR AN MRDF SERVICE AREA

The accompanying charts are based on the task force's investigations of possible locations for an MRDF service area. A blank box indicates that the site was judged adequate or at least not problematic on this factor. An "0" indicates that the site was judged to be inadequate; and a "?" means that the site was judged questionable on a given factor.

In addition to assessing each site on the same factors the Task Force considered particular advantages and/or disadvantages of each location. These comments follow, arranged by site number:

1. IBM Software Development Project (2nd floor, Davis Library)
   This site has the advantage of already being identified with micro use. It is questionable whether the Microforms staff could provide supervision and adequate technical assistance at this location.

2. Epigraphy Room (2nd floor, Davis Library)
   Using this location would reduce the number of group study rooms because the Epigraphy Collection would have to be moved to another location. Epigraphy materials, however, may be better located near relevant materials in the general collection. It remains questionable whether the microforms staff could provide supervision and adequate technical assistance at this location.

3. Microform Reading Room (2nd floor, Davis Library)
   Chief disadvantage is the adding micros would create congestion in this area.

4. Humanities Annex at Top of Stairwell (2nd floor, Davis Library)
   In addition to inadequacies noted, this location would limit expansion of the Humanities Collection.

5. Gallery of Mezzanine (2nd floor, Davis Library)
   Additional disadvantage is the loss of a large and heavily used study area.

6. Computer Search Room in BA/SS (1st floor, Davis Library)
   This location has more advantages than other locations with the exception of the TRLN office area. A major disadvantage is that this space is allocated for a new position in BA/SS in 1986-87.

7. Phonefiche Area in Humanities (1st floor, Davis Library)
   Another disadvantage of this area is the distance from the BA/SS desk. Alternations may be necessary.

8. Central Carrel Area in Reference Room (1st floor, Davis Library)
   Chief disadvantage is that the number of spaces for study/AV use would be reduced.

9. Graduate Reading Room, Davis Stacks (any floor, 3-8)
   Additional disadvantage is the loss of a group study room.

10. Area Above BA/SS Desk (2nd floor, Davis Library)
    Wholly unsatisfactory for reasons indicated.

11. Area Outside IBM Courseware Development Project Room (2nd floor, Davis Library)
    While this area merits some consideration its overall suitability remains questionable.

12. Information File Area in BA/SS (1st floor, Davis Library)
    Main disadvantage is that use of this location would require rearranging the BA/SS collection. Noise would be a problem not only for users in the Reference Room, but for adjacent offices.

13. TRLN Office Area (1st floor, Davis Library)
Major disadvantage is the uncertainty about when this area might be available since that depends on the renovation of Wilson Library. In addition, while located on the first floor of Davis, it remains distant from the public service units there.

14. Area Adjacent to Non-Print Department (UL, 1st floor)
It is questionable whether Non-Print staff could handle supervisory, technical, and public service functions in addition to servicing non-print needs of users. A major disadvantage would be the distance from the main collection and other print reference sources unless these latter were to be duplicated.

15. Area Adjacent to Reference Desk (UL, 1st floor)
Major disadvantage is that this space is needed for expanding the present reference and periodical collection in the Undergraduate Library. All factors considered, however, this may be the most suitable area in the Undergraduate Library.

16. Reading Lounge (UL, lower level)
Major disadvantages as indicated center around the area's remoteness from other public service areas and staff.

17. Special Collections Area (UL, adjacent to Reading Lounge, lower level)
Area shares most of disadvantages of site 16. An additional disadvantage concerns the data of availability since the move of the Edwards Collection (presently housed there) is dependent on completion of Wilson Library renovation.

	SITE	Space/Hardware	Storage/Software	Wiring	Lighting	Noise Control	Humidity/Ventilation	Storage/Supplies	Security/Theft	Security/Damage	Circulation/Software	Supervisor Access	Assistance/Technical	Assistance/Reference	Proximity/Public Service	Proximity/Print Sources	Space/Expansion	Alterations Unnecessary	Ready Availability
1	IBM Software Dev. Project Room (Davis, 2nd floor)		?									?	?		O	O	?		O
2	Epigraphy Room (Davis, 2nd floor)											?	?		O	O	?	?	
3	Microform Reading Room (Davis, 2nd floor)	O			O	?							?	?	?	O	O	O	
4	Humanities Annex at Top of Stairwell (Davis, 2nd floor)		O	?	?	O		O	O	O	O	?	?	?	?	?	?	?	
5	Gallery of Mezzanine (Davis, 2nd floor)		O			O		O	O	O	O	O	O	O	O	O			
6	Computer Search Room in BA/SS (Davis, 1st floor)						O	?									O		

O Inadequate
? Questionable

	SITE	Space/Hardware	Storage/Software	Wiring	Lighting	Noise Control	Humidity/Ventilation	Storage/Supplies	Security/Theft	Security/Damage	Circulation/Software	Supervisor Access	Assistance/Technical	Assistance/Reference	Proximity/Public Service	Proximity/Print Sources	Space/Expansion	Alterations Unnecessary	Ready Availability
7	Phonefiche Area in Humanities (Davis, 1st floor)	?		?		O			O	O							?	O	
8	Central Carrel Area in Reference Room (Davis, 1st floor)	?		?		O			O	O		?					?	?	
9	Graduate Reading Room in Stacks (one) (Davis, 3-8 floors)							O	O	O	O	O	O	O	O	O		?	
10	Area above BA/SS Desk (Davis, 2nd floor)		O	?	?	O		O	O	O	O	O	O	O	O	?	O	?	
11	Area outside IBM Courseware Dev. Project Room (Davis, 2nd floor)					O		O	O			?	?	O		O	?		
12	Information File Area in BA/SS (Davis, 1st floor)			?		O			O	O							?	O	

O Inadequate
? Questionable

	SITE	Space/Hardware	Storage/Software	Wiring	Lighting	Noise Control	Humidity/Ventilation	Storage/Supplies	Security/Theft	Security/Damage	Circulation/Software	Supervisor Access	Assistance/Technical	Assistance/Reference	Proximity/Public Service	Proximity/Print Sources	Space/Expansion	Alterations Unnecessary	Ready Availability
13	TRLN Office Area (Davis, 1st floor)										?	?	?	?	?	?	?		O
14	Area adjacent to Non-Print Department (UL, 1st floor)								O	O			?	?		?		O	
15	Area adjacent to Reference Desk (UL, 1st floor)	O	O	?	?	O		O	O	O							O	O	
16	Reading Lounge (UL, lower level)										O	O	O	O	O	O		O	
17	Special Collections Area (UL, lower level)			O								O	O	O	O	O		O	O

O Inadequate
? Questionable